

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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PEACE

[Wall Street Journal.]

A prominent and somewhat over-advertised manufacturer of automobiles is quoted as saying that he is willing to spend his entire fortune to accomplish peace. It is a perfectly safe offer, because there is really nothing he can do about it if his fortune were ten times as large as it is.

Great Britain and her allies are willing to do more. In order to accomplish peace they are spending not millions, but billions. They are offering up human life, with the entire approval of the soldier who makes the personal sacrifice. They are doing that also by the million, and the Detroit car manufacturer, however rich he may be, has not enough money to buy a single one of these lives.

It must be plain to any reasonable person that the conception of peace held by the Allies is the true one. They will achieve it when they have made conditions such that there shall be no more war. A mere truce, giving Germany a chance to build up again its war machine and devise some expedient for evading the overwhelming predominance of the British navy, which alone has brought German world ambitions to naught, would not be peace at all, but a premium upon future murder.

It is not here suggested that the war can continue indefinitely. For financial reasons alone there is good ground for supposing that it is nearing its close. But a peace on the lines suggested by our maudlin and befogged peace advocates here is unthinkable. Germany is beaten now. She was beaten when the first rush on Paris failed. She can only make the beating more expensive to her adversaries, and this she is doing. But peace is an impossibility until she has learned once and for all that she is beaten, and, in the spiritual and eternal fact, beaten for all time.

[To which every right-thinking, honest-hearted lover of liberty and hater of unscrupulous murder of women and children should reverently say Amen and Amen.—Manufacturers Record.]

BALTIMORE, DECEMBER 2, 1915



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MANUFACTURERS RECORD

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DARE WE GIVE THANKS?

[Marion Couthouy Smith in New York Tribune.]

We thank Thee, Lord, that we are not
As other men are today—
Homeless and driven, forced to the wall,
Broken and blind in the fray.
For safety and ease, for wealth and peace,
We give Thee praise, O Lord!
—But ye have looked on your brothers' woe
And sheathed your sword!

We thank Thee, Lord, that in our homes
Child-faces lift to the light,
And child-feet run in our gardens, free
From terror and death and blight.
We praise Thee, Lord, for the sun and rain,
And all our fields' increase.
—But ye have seen fair homes laid waste
And held your peace!

We thank Thee, Lord, that we are not
Today as those others are—
Fighting the force of ruthless hordes,
Helpless and scattered far!
—But since ye have known the cup they drink,
Nor ris'n to their souls' desire,
Ye shall stand one day on the fearful brink
Of their baptismal fire.

"COCKSURE."

A YOUNG lady of Philadelphia, writing to the MANUFACTURERS RECORD expressing her appreciation of the pamphlet, "National Preparedness," recently issued by us, says:

Americans are so "cocksure" they seem to feel that nothing can happen to them; that they can get up with a toy gun and sword and "lick the whole world."

A statesman could not better express the situation.

A QUESTION FOR CONGRESSMAN KITCHIN.

[Wall Street Journal.]

MR. KITCHIN wants to investigate the preparedness agitation, and wants to know who are behind the movement. Why not investigate the anti-preparedness agitation? Are the Germans behind Mr. Kitchin?

IT IS TIME TO BE "IN DEADLY EARNEST" IN PREPAREDNESS WORK.

A fat goose wobbling around and rolling in its very fatness, surrounded by starving wolves, would be as safe as would our country in its present condition of unpreparedness if attacked by any great world power.

REPLYING to the criticism in a recent issue of the MANUFACTURERS RECORD of some of its statements, the News of Charlotte, N. C., says:

In order to be as fair in the matter as we know how to be, we are making room on this page today for the leading editorial appearing in the current issue of the MANUFACTURERS RECORD. To our mind, this is the strongest appeal yet made by any newspaper or public speaker in defense of the preparedness plan. It presents in forcible language the position of those who would arm this country to the teeth in fear of an attack which some of the most excited believe the European war shows we are likely to be subjected to at any time. The MANUFACTURERS RECORD is in deadly earnest. It honestly believes that before an attack of any foreign foe we would wilt and fall and be trampled under foot.

With this hearty commendation of the statements made by the MANUFACTURERS RECORD, the News returns to the discussion, and while we give that publication full credit for the honesty of its convictions, we can but express amazement at its absolute lack of knowledge of the subject. Referring to the over-running of Belgium and the invasion of Galicia, the News says:

And yet, horrible as this war has been, has it not taught the almost impossibility of invading the territory of any of the larger nations of the world? France, with all of her unpreparedness, was able to keep out of Paris, in fact to thrust back many miles, an army which had been tutored and trained and perfected and provided with every ingenuity of destruction for sixty years past. For a solid year the mighty German war machine has tried to break through the French lines in the West. For many months this monster German machine tried to pierce through Belgium and reach the coast. But France, with her "untrained" army, has held the finished product of modern militarism at bay.

What amazing statements, in view of the fact that France, instead of an "untrained" army, had a magnificently trained army, not quite matching in numbers the German army, nevertheless a splendidly-trained and splendidly-equipped army, which she was able to throw into the field instantaneously, and then to call on her reserves, for compulsory military training has been the rule in France, as in Germany. Added to this was the heroic fight put up by Belgium, which, with a well-trained and well-equipped army and fortifications which had been built under the direction of a man supposed to be the best expert in the world on the subject, was able to hold the Germans in check for a few weeks until England could throw into France and Belgium her first army of trained and equipped men, unfortunately, however, entirely too small for the situation.

To talk about France's army being "untrained" is indicative of the whole trend of thought in the

News, and is an indication of the absolute lack of understanding on the part of those who are fighting against "preparedness" or the lessons taught by this war.

But despite France's superbly trained and equipped army, had not Belgium stayed the savage onslaught of Germany's forces, giving England time to utilize her marvelous merchant marine and navy in landing her army in France, and at the same time helping that country to secure time for mobilization, Paris would within thirty days have been under Germany's control, and to all intents and purposes France's doom would have been forever sealed.

The News says:

If the allied fleets of England and France and Italy and Russia have so far not dared to land troops on the territory of their common enemy because of the presence along its borders of adequate agencies of self-protection, is it not a wilder dream than one emanating from a fool's paradise to suppose that either one or all of them could successfully conduct armies three thousand miles across water and attempt attack upon a nation favored by the Almighty with coasts almost impossible of invasion?

Is it conceivable that any well-informed man (and we know that the editor of the News is in general well informed) could make such statements? In the first place, the German coast is very limited in area. It is guarded by the greatest fortification in the world. The entrance to German waters is full of floating mines, which would make an invasion of that coast a foolhardy, indeed, a suicidal attempt. But our condition is as unlike that of Germany in respect to invasion as it is possible for the human mind to conceive.

We have 5000 miles of coast line as against the very limited coast area of Germany. A large part of this coast line is without one single protection of any kind. There are probably not 50 miles of the 3000 miles of coast line of the South which could not be used in a scheme for invasion. It would not be possible for use to sow the limitless number of mines through all this vast region, as Germany has done to protect her limited coast, nor have we the mines, nor could we make them in time if we were in a situation to need them.

This war has demonstrated that the capture of great forts is not essential in a scheme of landing troops. It has also demonstrated that war comes with the suddenness of a thief in the night. No warning is given. Strike first and declare war afterwards is now the order of the day.

Along the entire Gulf and Atlantic coast it would be feasible, even though troopships and battleships did not come within several miles of the coast, to land great armies and absolutely to protect their

landing by the guns on ships which might be ten or twelve miles away from the shore; and we have neither the guns nor the ships nor the men to prevent such a landing.

The News refers to our army, "which in times past has been viewed with pride."

Splendid men are in our army, splendidly officered; but we could not assemble at any one point in the United States within 30 days' time an army of over 25,000 trained soldiers; and if we could, they would have no ammunition and no equipment with which to wage war.

Our army is in size and in poor equipment one of the greatest jokes of the day.

The News asks, "How far does the MANUFACTURERS RECORD want to go?"

The MANUFACTURERS RECORD wants to go far enough, and to do it quickly enough, to make the overrunning of this country by an enemy an impossibility so far as that is feasible. And when we bear in mind the enormous armies of Europe and their marvelous equipment, any intelligent man has to recognize that the plans thus far outlined by President Wilson fall very far short of putting us in that position.

An answer to the News and to others who are opposing "Preparedness" to save ourselves from possible destruction is found in an article by Henry Reuterdahl in the December issue of the Metropolitan. Mr. Reuterdahl is a well-known writer, who speaks with authority in regard to our army and navy. He emphasizes in his opening paragraph how we are regarded by European nations when he says:

Our patriotism is waning and drifting away on the ebb tide of indifference, and as a nation our manhood is on the decline. National conscience we have none. No longer can an American hold up his head abroad. Our place in the world is that of a money-bag. In Germany we are laughed at, despised as spineless weaklings; our money alone is feared. England thinks we are cowards and American life a commodity which can be paid for in cash. The French shrug their shoulders.

"Will the Gringos fight?" "No," says the Mexican. "We have ambushed their soldiers, killed their men, burned their homes and raped their women. Can we do any more to make them fight? But they won't, the cowards."

These statements, strong as they are, are true. Our very wealth, the great money-bag that we hold, into which the riches of the world are being poured, is arousing the envy and the cupidity of other nations.

Every effort that we are making to capture from neutral countries the trade which they have heretofore carried on with Europe is creating a spirit of bitterness and hatred to us; and as the individual man despises the man who comes in and takes his job from him and causes him and his family to starve, so nations despise others nations that capture their trade and bring poverty upon them.

Our weakness in defense is freely understood by foreign nations. Our safety in the past has been mainly due to the jealousies of European nations, and to the effort to hold the balance of power which would have thrown into partnership with us some of the rival nations of Europe had anyone undertaken war against us. That situation no longer exists. Out of this war the Allies or the Germans will come victorious, and the defeated will have no ability and no desire to join hands with us in the event of an attack upon us.

A fat goose wobbling around and rolling in its

very fatness, surrounded by starving wolves, would be as safe as would our country in its present condition of unpreparedness if attacked by any great world power.

A few statements from Reuterdahl's article will illuminate our situation. He says:

Before our very eyes our navy and army have deteriorated. So far, no one cares. In the pages of this magazine it has been demonstrated and proved beyond argument that the American navy is not strong enough to maintain the command of the sea and uphold the Monroe doctrine. With the American fleet swept off the sea, the enemy's invasion on our soil becomes but a matter of steamer schedule. Twice this has been done in the war games of our own fleet; the defending ships were "sunk" and the "enemy" able to land. Remember that the American navy is but a lagging fourth in naval statistics and much farther down the list in actual efficiency. Voting millions today will not make up for the neglect of yesterday—and you do not make a navy by pressing a button.

With the navy destroyed, the American army alone must defend the country. It cannot do so. Our army is smaller than that of Montenegro. But its valiant bravery no man questions.

And then Mr. Reuterdahl calls attention to the fact that the army is not large enough even to defend our forts. It has no automobiles to transport baggage. Its shoes would wear out under two months' marching. It has a total of 19 motor ambulances for its wounded. It is without ammunition trains, armored automobiles, armored railroad trains, heavy mortars for field work. One of the startling statements made by him is:

"Has ammunition but for a couple of days' battle and with less than one hour's supply for coast defense guns, and has not sufficient field artillery."

"The mobile army in continental United States is only a little larger than twice the New York police force, and its reserve counts some 16 men. It has only ten aeroplanes. The American army today is the costliest military joke of the age. That it is under the present antiquated system not in a worse condition is due to the keen brains and hard work of its best leaders. It would be murder to send it into battle. But it would go, nevertheless, cheerfully and with colors flying, as the regular army has always done."

Referring to the scarcity of guns, Mr. Reuterdahl says many of the disappearing carriages of the coast rifles are obsolete, and the carriages of the heavy guns must be remodeled. They permit only a limited degree of elevation, and are now useless against the latest superdreadnaughts, which could stay entirely beyond the range of the guns of our forts and still batter them to pieces with their long-range guns.

Of the mortars which pound the trenches and the emplacements in the war abroad we have not a single one.

Of the quick-firing guns or field artillery we have 634 guns, while Germany has over 5000.

In every other particular the difference against us is equally great.

When we talk about our ability to do things quickly we should remember some of our country's unfortunate experiences from Revolutionary days to the Spanish War, due to the lack of preparedness and of a trained army. Reuterdahl, referring to some of these facts, says:

As the quartermaster's department almost wrecked the army during the Spanish War, its cumbersome machinery will do so again. The misery at Tampa, the confusion at Siboney and Daiquiri will be repeated on a large scale. What is useless in war is useless in peace is not yet the

battle-cry. God Almighty could not supply our forces in war and conform to the Army Regulations; no one in the army can, and the system of "rigid accountability" would go to smash in sixty days. Keeping the army going would be a grab-bag operation, as it was in the Spanish War. In and around Tampa a thousand or more loaded cars stood on the sidings as far north as Columbia, S. C. The bills of lading were lost; no one knew what the cars contained, and there were but ten army teams for the handling of the stuff. So the cars were simply broken open; bacon was separated from bandages, ammunition from tent-pins, and the whole dumped on the transports for the front or stacked on the beach.

Any one at all familiar with the disgraceful conduct of our war with Spain by reason of wretched incompetence and lack of training and lack of system and lack of facilities knows that Mr. Reuterdahl's statement is a very mild presentation of one of the sad blots on American history.

If the Confederacy or the Union had had 50,000 to 100,000 trained men in an organized army, properly equipped, and the other side had had only an untrained army, such as both brought into the field, the war would have been over in a few months. For the first two years of the war the Union army was dominated almost wholly by politics. One general after another was removed because of political squabbles, or the wild agitations which swept through the country because men with incompetent or untrained armies were not able to immediately accomplish what the nation thought ought to be done. Soldiers could not be secured in sufficient numbers by the volunteer system, but conscription produced terrible riots and threats of destruction of the Union, and similar conditions, only far worse, would now prevail if we had war forced upon us.

Though the South was saved from some of this situation by its reliance upon the superb genius of Robert E. Lee and Stonewall Jackson, it, too, unfortunately, had its own political squabbles, which mightily affected the situation, and in many respects hampered and retarded the organization of its forces.

The lack of a trained army in the North gave to the South the opportunity in the first year or two of the fight to train its army and equip it as best it could.

In these days, however, when vast armies are organized and equipped with the greatest death-dealing inventions ever known to man, an untrained army is utterly useless. It would be wholesale, cold-blooded murder to send 1,000,000 untrained soldiers against an invading army of 100,000 of Europe's picked and trained and equipped soldiers.

The sorry figure this country would cut in case of attack by any of the nations now at war is apparent when one is confronted with the facts of our present condition of unpreparedness. In a speech at the annual dinner of the Men's Club of St. Paul's Methodist Church in New York a few nights ago, ex-Representative William M. Calder of Brooklyn, speaking from his experience as a member for many years of the House Committee on Military Affairs and the Subcommittee on Coast Fortifications, said:

"Our ammunition supply for coast fortifications in our insular possessions is sufficient only for two hours' action. In the continental United States we have ammunition for the large guns for only three-quarters of an hour and for our mortars half an hour. In other words, if all our seacoast defense guns were put into action, at the end of three-quarters of an hour they would have exhausted their ammunition supply."

Could anything more humilatingly reveal our pit-

ably weak condition and our absolute lack of preparedness to repel attack?

We must not lay to ourselves the flattering misconception that Europe is afraid of our wealth.

It is not.

Our wealth excites its cupidity, for our wealth could be made to pay the cost of Europe's war.

We need not think that we have made friends with the Allies or with the Teutons.

We have not.

We are making enemies of both.

The Allies feel that we shirked our responsibility and shirked our supreme opportunity to stand with them in their battle for the world's civilization and human rights, and that we are using this situation to fatten ourselves at their expense. Though they are pouring their money into this country for war supplies and grain and cotton, we may rest assured that when the war is over all of the power in finance and in business and in commerce of the Allies will be concentrated upon the development of their business with the world, seeking to regain what they have lost and what we have gained, and appealing to the world's sympathy in order to regain their trade.

Like the bully who struts the walk and creates antagonism or hatred on the part of every boy in

the school, we have strutted down the walk of world affairs; we have criticized both sides and denounced everything that they are doing. We have striven to hurt without in any way seeking to help, and we have made enemies of all instead of friends of some.

Every man knows what sooner or later always happens to the bully. We may not have intended to be the bully, but nevertheless we have so acted, and the world so regards us, and now we strut about, absolutely unprotected, though envy and cupidity and hatred are gathering their forces all around us.

Perchance we may deserve the punishment that the bully gets in order to bring us to our senses, but those who love this country, who desire to see its highest development safeguarded, who appreciate what civil and religious liberty mean, who believe in democracy rather than in autocracy, who have regard for the helpless men and the women and children throughout the land, are willing to sacrifice much that we may be able to protect ourselves in the days that are ahead of us.

In one thing only the News is right, and that is when it says:

"The MANUFACTURERS RECORD is in deadly earnest." We are.

would slink away, and I would have peace through preparedness.

Mean manhood is but a repetition of mean boyhood. The boy at school who has a weak frame and poor fists is always licked until he shows the white feather, and then his school life is a burden as he becomes an object of scorn; the boy of large frame, big muscles and handy fists is quite respected and has few battles. The simile follows for nations, as has been proven hundreds of times in the past history of the world.

The millennium has not come, and our highly civilized nation today stands as the juiciest plum in history for attack (on any old kind of trumped-up insult that would make us declare war) by any one of the foreign nations which might combine a high essence of modern scientific military progress, and present war experience, with the thirteenth century set of moral principles concerning the justice due to the balance of mankind.

A magnificent antelope, the very finest of his kind, stood on a prominence in the midst of plenteous feeding grounds, and in optimistic vein had a day-dream in which he stalked his head high and said: "I harm no other beast; I pursue my own way peacefully; I am an exalted type not only of all other antelopes, but of the type which all other beasts should be, and my altruistic sentiments should make them, one and all, bow to my wishes for universal beast happiness and freedom from attack." The tiger heard the monologue of self-praise and high sentiments, and then grinned and licked his chops and said: "You are a splendid specimen of antelope, and for that very reason you certainly do look good to me for the very best and most delicious meal I have ever had in all my past years," and in the next hour the most of that optimistic superior kind of antelope was beneath the tiger's hide. No moral. The tiger was a tiger, and the grand lullaby of the antelope fell on ears attuned only to the gnawing sounds of a ferocious appetite for choice morsels. Shall we be that superior antelope? In all reverence let us beseech that God forbid, for the sake of human destiny on our globe.

SPLENDID PRESENTATION OF UGLY REALTIES VS. BEAUTIFUL THEORIES

W. E. RUSSELL, Altoona, Pa.

Your editorial on "National Preparedness" in your issue of November 18 should be republished by every paper in this country that is devoted to the real interests of our nation and the maintenance of the Monroe Doctrine.

In that article you portray, with invincible logic, a condition of affairs so undreamt of, so diametrically opposed to human surmise, so radical in the upsetting of all calculations of civilization's power and Christianity's control, that the normal man, with mind open to facts, must give heed to the horrible march backward of human affairs in a large portion of the world, to the darkness of medieval savagery.

You show conclusively that the lust of power and greed which has supplanted justice and international comity will give avaricious pangs until the grasping paw reaches out for our vast wealth, while we are "hugging the delusive phantom of hope and lying supinely on our back until our future enemies shall have had opportunity to bind us hand and foot."

Of course, we all want peace, and we can demand it if we are in position to defy attack.

'Tis penny-wise and pound-foolish, in a monetary sense, to save a billion from preparedness cost and lose fifty billion through the ravages of war. 'Tis criminal, in a humanitarian sense, to sacrifice millions of precious lives and endure the terrible hellishness of war, with its savage horrors for women and children as well as men, because we have a miserly antagonism to paying a few more dollars in taxes. Alas, are we, in our greed, willing to risk a maelstrom of civilization similar to that which now engulfs the European Continent?

If peace talk is so powerful, if Christian effort is so efficacious, if the ideals of the just are so forceful in their effect upon all other men in the world, if the grand altruistic sentiments of righteous men and women have an invincible power against trespass of a nation's rights, let us by all means bow our knees in sincere request that all such advocates, with their admittedly noble motives, put to the test at once their combined influence for a Christmas of international peace, and if they succeed we all will yield a joyous obeisance to the exalted mastery of their superb motives and efforts, and if they fail, then they should have the same moral courage to sadly bow to the inevitable necessity of meeting the baser principles that seek control of human des-

tinies, on their own degraded plane, as it actually exists, rather than on the beautiful rainbow of equal justice to all men in matters both national and international.

He who deludes himself with the idea that a supposedly or really bankrupt nation, in emerging from the present "freeze-out" conflict in Europe, will settle down in sackcloth and ashes, reckons naught of that kind of human nature in which the hope buoyant could point to the United States as the one country whose vast wealth would furnish, in case of conquest, the greatest war indemnity in the world's history, rated in billions upon billions of dollars, and thus recoup the conquering nation's bankruptcy into positive opulence, with the enormously important added advantage of crippling our nation for a decade or more in the marts of the world's trade.

Is the picture overdrawn? Yes, to a dreamer; yes, to an altruist; yes, to a pessimist who thinks that defeat is always defeat for all time, but positively no to a practical man who sees the feasibility of such method for a nation, at the zenith of its militaristic ability, to risk further depths of supposed bankruptcy (and that term is quite misunderstood when it comes to a nation's bankruptcy), in a grand final effort for national reconstruction, wealth and a paying-off of hundreds of old sleeping scores in the triumphant conquest of our nation.

We are not international angels by a long shot; we have stepped on too many toes to be the adored and only lovely one from all parts of the earth. Nay, nay, Uncle Sam is quite an independent chap, with head erect (as it should be), but he can't hold it there and also be an humble angel "with one cheek open for another spat when the other is chided." The riding of two horses going in opposite directions has always been a failure.

We are in the fight to seize the world's commercial plums by peaceful competitive methods, but we err in correct vision if we do not notice the envious eye of the "boy across the wire fence" when the plums fall into our lap. If that boy "means fight," and he has the finest kind of an automatic revolver, and is a bull's-eye shot at that, I am apt to go to the sod in short order if I meet him with a back-number pistol. If he knew I was armed with the best repeating rifle he

To Be Passive Now Is to Be Traitorous.

C. J. OSBORN CO., per C. J. Osborn, 101 Beekman St., New York.

We are in receipt of your pamphlet relative to National Preparedness, and the only comment we have to make therein is that it is not strong enough, although quite to the point. Being passive at this time may negatively, but nevertheless truthfully, be considered as being traitorous to the country, for to delay being fully equipped for defence and offence when the time arrives is criminal, and just as illogical as it would be if we were to be without police protection.

We don't think there is any argument necessary; common sense alone will tell any right-thinking man that the first law is that of self-protection and the protection of the weak. We need a national executive and a national cabinet consisting of men who are men in fact as well as in name at a crucial moment—those who are likely to make mistakes, but in any event will maintain the honor, integrity and independence of the nation, and the writer hopes that the time will come when we will again have such men running the executive branch of this Government, and we very much fear that the same is true of a large number of our Senators and Representatives in Congress.

Unprepared for Peace no Less Than for War.

J. W. STARRITT, General Manager Marion Foundry and Machine Works, Marion, Va.

I have read with a great deal of interest your editorials on "National Preparedness," and thank you for the resume of them from October 28 in pamphlet form.

I am a Southerner, one "the hollow of whose foot makes a hole in the ground," and heartily agree with you in regard to the important part the iron industry takes in that final and effective preparedness that must exist before this country can hope to be able to cope successfully with even a nation of secondary importance.

I think you are leaving out of consideration our most striking unpreparedness, and one vital to every individual of the nation, viz., our utter unpreparedness to take care of our own industries, even in times of peace.

We are, in a great measure, dependent upon foreign commerce for dyes and chemicals so largely used in our manufactures, while Government records show that all these necessities could be produced in the United States. Our financiers and those interested in the development of iron and steel should forget selfish greed and learn of Germany to think of the welfare of the vast armies of laboring men and women dependent on them for daily bread. To be self-respecting, as a nation, we must be self-sustaining and independent of assistance from foreign countries.

In my opinion, it is the duty of the Government to inform itself on the exact deficiencies, and, if necessary, enact special legislation to foster these new industries; but I am not in favor of protective legislation in its broadest sense.

To lose one's self-respect represents the lowest level of society. Can we, as a people, fully respect our great American republic, possessing as it does the great deposits of minerals and materials to meet our every want, and yet for lack of push and enterprise these great deposits lie dormant, and we as a people are to some extent dependents and beggars? We should get rid of this idea of "made in Germany" and "made in Paris," and have instead "made in America." The time has come for every true American to stand up and call himself "Mister."

Country Should Not Rely Wholly on Lake Superior Ore Supplies.

GEO. H. CROSBY, The Biltmore, New York.

I read with a great deal of interest your editorial regarding the "Iron Ore Menace," and fully agree with you that a menace would exist in case of war with foreign countries. I am and have been for the past 25 years connected with the iron-ore development of the Lake Superior district, and know the development is confined to a very small area, and all adjacent to the Lake Superior region.

I am interested in iron-ore deposits in the State of Washington, and also in Utah. Both of these deposits are considerable distance from the ore of the Lake Superior district. The deposit in Utah has been proven to be of considerable importance from a tonnage and quantity point of view. Deposits in Washington have not been as fully explored, but I believe that by further exploration it would also be proven to be of great importance; the Washington deposit as to quality surpasses that of any other ore yet discovered in the United States.

It would not be possible for a private operator to develop these ore bodies at this time, as they are too far from the market to make them commercial. However, these deposits, if developed, would make a very advantageous source of supply, and could be easily defended against an invasion by foreign countries.

Misinterpreted Our Meaning—The South Falling Behind in Iron Production.

JAMES BOWRON, President Gulf States Steel Co., Birmingham, Ala.

I have read the editorial "Birmingham Arousing Itself." I am sorry that the ranks of the present workers in the Birmingham coal, iron and steel district do not contain, in the opinion of your editorial writer, men of equal standing with those whom you enumerate, and who have passed away from us within the past 20 years. For myself, however, looking back as I am able to do over the history of every iron and steel plant in this district, reviewing the succession of failures which arose, some of them attributable to the very men whose names you give in your editorial, and reviewing the enormous strides in advance which have taken place in this district within the past 10 years, I am well content to believe that the developers of the present generation are carrying their task quite as well as the departed worthies, and that this may be said without in any sense diminishing the tribute of honor and of praise due to those who are gone.

A quarter of a century ago iron was being made here from surface decomposed ores, easily accessible and cheaply mined. These have long since been exhausted, and expensive power equipment is necessary to produce lower grade ores. The ore-mining industry has been revolutionized. By-product ovens have taken the place, to a

large extent, of the old beehive ovens. Steel is being made on a broad and comprehensive scale, able to compete with any of our Northern friends, although ridiculed a quarter of a century ago as a "Utopian dream." The South has led the way in point of fact in establishing the success in this country of the duplex open-hearth system and of the use of by-product surplus gas in open-hearth furnaces.

The plants of the pioneers denuded the district of its surface minerals, smelted in cheap and small furnaces, and had the entire country for a market. In the days of the men you name the Mesaba ore fields had not been discovered, or at least developed, and the enormous lake commerce of today with the furnaces of Chicago, Toledo, Buffalo and Cleveland were unknown as a competitive factor. Today the South is holding its own and steadily growing, although deprived of the markets north of the Ohio and Potomac rivers for pig-iron. The iron and steel products of Birmingham, including Gadsden as part of the district, are going, to my knowledge, into Europe, Asia, Africa and South America. The development may be slow, but it is steady and continuous, and the people, I will venture to say, who have their money, their brain power and their hearts in the industry will continue to develop it, even with or without the stimulus of platitudinous resolutions or the spurring on of any newspapers.

The South has never had, from the days of slavery, any man with bigger brain, bigger scientific knowledge, bigger conceptions of what might be done, than the man today at the head of one of the subsidiary companies of the Steel Corporation in this district.

Because the South is blind to its own interest, because it is full of people who vote the Democratic ticket utterly regardless of the platform and swallow a free-trade platform or the whole tariff as a delicious morsel, and whose vote can be counted upon for the administration without the incentive of patronage or the expenditure of Government moneys, we have not had the Governmental development of our waterways that we should have. Birmingham is as much entitled to the slack watering of Valley Creek, bringing barge water to the suburban town of Bessemer, as Pittsburgh is entitled to the slack watering of the Ohio River. Ohio is a doubtful State, and receives Government help. Alabama will vote the Democratic ticket even though assessed for the privilege of voting, instead of having Government expenditures within its borders. Your articles recently pointing out the desirability of locating some part of the Government activities in the production of munitions in this district, well removed from danger of hostile fleets and landing parties, have been well considered and well placed. The Government will do well to follow your suggestion. The Birmingham district will take care of itself in the iron and steel trade, and it needs no such invidious comparison between the dead and the living to spur the present generation to do its duty, and to do it earnestly.

[We take pleasure in publishing Mr. Bowron's letter, although unintentionally he has misinterpreted the thought of the editorial. No one is more appreciative than is the MANUFACTURERS RECORD of what Mr. Bowron himself has done in saving and developing the Gulf States Steel proposition and putting it on its feet in the splendid shape it is at present, and surely no one appreciates more than we do the magnificent work that George Crawford and his associates have done in the Tennessee Company, and the things that other Birmingham men are doing. But this does not cover the point. In this day, when tens and tens of millions of dollars are being expended in the vast enlargement of the iron and steel interests of the East and the West, when new furnaces are going up and new steel plants being erected in other sections, the Birmingham district is not building a single new furnace or steel plant, nor enlarging any existing steel plant. Its magnificent advantages are being utilized by existing plants; but relatively Birmingham is not commanding the national attention it did in former years, and Mr. Bowron is in error when he suggests that in iron "the South is holding its own." As a matter of fact the South has been steadily falling behind relatively in iron production for a decade or more. Its percentage of iron production compared with the total for the country is annually decreasing. The old plants, many of which went through hard trials due to all the adverse conditions mentioned by Mr. Bowron, have been reshaped and most of them

put on their feet, and are doing great things; but nothing new is being developed looking to a vast broadening of the metallurgical activities of the Birmingham district. In times past many great enterprises were organized by men who drew into the district millions of capital from other sections. Some of it may not have been wisely invested; some of it may not have been profitable; some of the enterprises may not have been well managed. Nevertheless, these pioneers did great things, and Mr. Bowron himself is numbered among them, for as treasurer of the Tennessee Coal, Iron & Railroad Co. he carried it through financial weather which would have wrecked any company without such a skillful financial pilot.

THE MANUFACTURERS RECORD, without any thought of reflecting on any of the people or the institutions of Birmingham, still comes back to the suggestion of quickening the life and thought of the community that it may avail itself of the greatest opportunity ever presented to them, or any other district, to utilize a strategic situation unequalled in the history of the nation to tremendously augment and advance the iron and steel interests in all their broadest ramifications of the whole Birmingham region.—Editor MANUFACTURERS RECORD.]

Broad Outline of What "Preparedness" Must Mean to the Nation.

LOUIS A. FREEDMAN, Manager Technology Sales Co., Inc., 29 Broadway, New York.

All right-thinking Americans who have read your brilliant and solid presentation of the facts as to National Preparedness will follow you in the conclusions you draw from them. The welding of the loosely united States which constitute the United States into a co-ordinated whole to which rightly the name of nation might be given has shown itself to be the most urgent need which this country has had to face since its inception. There has been too much of the "haven of refuge" about America, too little of intense and serious attachment to it. Never until today would we have believed that so many to whom America had given a home such as they never had in their native land, would in an instant allow the mask to drop, showing themselves to be at least contemptibly ungrateful, at worst criminally treacherous.

The unifying of our vast industrial enterprises with a view to the protection of this nation in case of need is a magnificent program to which we must all subscribe, and for the realization of which we must all work. But this unification must have in it an element of permanency, which it can obtain only by remolding our whole social and political structure. All those industries upon which the defence of the nation must depend must be so protected against political and social changes that they will be certain of subsistence in adversity as well as in prosperity. It is only a short 12 months ago that the United States Steel Corporation and its kindred were passing through one of the most depressing periods in their history. Today we see them at the apex of good fortune. Let the war stop, and not alone the steel industries, but many others, may find their present inadequate capacity far in excess of any possible requirements.

Not alone is it too much, it is entire futile, to expect that corporations or individuals, however wealthy, will establish and maintain enormous plants all over the country to meet possible military exigencies without Government provision being made for the support of this "insurance equipment."

It is not merely a question of spending \$100,000,000, more or less, in establishing plants at various military strategic centers in the United States, so that the munition-making industry of the country in case of war may not be paralyzed by a well-directed stroke at a single point; if the \$100,000,000 so spent were all the industries involved would not hesitate to pay this premium on war risk. But such initial expenditures would be merely the preliminary to an unceasing flow of money into the same channels. No company, whatever its resources, can afford to establish itself in an industrially less favorable location because of considerations which have a remote bearing on the direct conduct of its business. Not alone can it not afford to, it would be vain to do so, unless it have the co-operation of the nation in whose behalf it is thus putting itself

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at an industrial disadvantage. We all feel that the steel, the chemical and related industries are semi-public institutions, but our country cannot expect of them patriotic devotion and sacrifices without assuming towards them the obligation of assuring them a permanent business existence.

But as soon as we take this attitude we are entering upon a halfway State socialism in so far as it affects the military defense of this country. We cannot expect the munition-making industry, with all its vast ramifications, voluntarily to distribute itself over the country in a way that would best serve national needs; we cannot expect this industry to create new industries to fill up any gaps—out of patriotic devotion. The whole country owes it to itself to see that the support of this industry of defense become an obligation of the entire nation, not the voluntary contribution of part of it.

To bring this about, a complete change of attitude within us is necessary and a recasting of political ideas and practices. Are we prepared to do this? That portion of us which has taken and continues to take to heart the lessons of the European war—is it large and influential enough to effect such a change? We need serious discussion followed by prompt action now.

Should Receive the Widest Possible Publicity.

HENRY L. WEST, Executive Secretary the National Security League, Inc., New York.

I have read with great interest the pamphlet which you have sent me, consisting of editorials and articles reprinted from the MANUFACTURERS RECORD, and have placed same in my personal file for immediate reference. It seems to me that the matter should receive the very widest possible publicity, and I hope that you are circulating the pamphlet among those who have not the advantage of the large circulation of the MANUFACTURERS RECORD.

Develop Mississippi Valley in Behalf of National Preparedness.

JASON W. COOPER, Director Griggs, Cooper & Co., Manufacturing Wholesale Grocers, St. Paul, Minn.

We all need to feel that the country is prepared to defend itself at all times, and ammunition for defense ought to be made in this country and food for armies ought also to be raised in the country; so we have before us a large proposition, which needs general treatment.

The industries of the country are largely controlled in the East by large combinations, and the distribution of these products have been made from that section covering the entire country, so that no matter where produced, the freight is added from New York in the entire country. Again, transcontinental rates across the continent are made alike to all points, so that the farthest point from point of production pays the same rate as the Mississippi Valley points. Thus we stand in rather a peculiar position at this time, and especially so since the rulings of the Interstate Commerce Commission have put us where we were when this market was built up with rates on the Mississippi River, before railroads were built to this country.

The Panama Canal has opened a new avenue to this market, and with the aid of the money appropriated by Congress to make it navigable we can put the Mississippi River into use for the year 1916, which will overcome the rates of which I have spoken, and it would seem to me that the entire rate situation of the country would be changed some of these days.

The Mississippi River and its tributaries are great factors in the development of the Mississippi Valley. A new contract on the Chippewa River will produce horse-power for manufacturing purposes. This is only one of the many streams furnishing electric horse-power for manufacturing and other purposes along the Mississippi Valley, and there are still thousands of horse-power available whenever the Mississippi Valley decides to take care of itself, especially so in reference to rates now suggested.

I agree with you that we ought not to concentrate the production of war material on the Atlantic coast. It ought to be distributed over the country, so that in time of an attack we would have different points from which to draw our supplies. We are a nation inviting people from all nations of the world to come to our country and become citizens, and have all the care and protection we

give to our American people. Some of them become citizens, and others do not, and in time of war go back to fight the battles of their fatherland, so that we need a careful understanding of all conditions to be ready for anything that might come to us in the future.

I would say that the ores from Lake Superior can come to St. Paul and Minneapolis as well as to Chicago and Pittsburgh. We have along the Mississippi and Ohio rivers a great quantity of coal available for all purposes, and if this stream is made a basis of future development along these lines it will be to the interest of the whole country to bring this about. We do not understand that they expect to put boats of defense on Lake Superior. It has been a plan to build a canal from St. Paul to Lake Superior, and in the judgment of all concerned it ought to be deep enough to carry submarines or boats of defense along the Mississippi Valley and through that canal to Lake Superior and protect that district from any attacks from any country. This matter has been advocated by Eastern men, with outside waterways from Boston to Texas points, for defense purposes. The same reason would apply for the Mississippi Valley, and it would seem to me we ought to have at least 12 feet of water in the Mississippi River and 12 feet of water to Lake Superior, so that we would be prepared to make proper defense against attacks from either coast.

IMPERILING THE NATION IN CHAMPIONSHIP OF TRADE WHEN THE WORLD IS FACING THE GREATEST CRISIS OF HISTORY.

THIS country is treading on dangerous ground. It is time for the Government at Washington and the people of the country at large to fully understand the situation.

Stirred by absurd statements in regard to England's position as to exports to neutral countries, there is growing up a disposition to bitterly antagonize Great Britain and the Allies.

In doing so we are playing with fire, and mighty dangerous fire at that.

More than that, however, we are antagonizing the nations that are trying to save the civilization of the world. We ought to be standing by them and bidding them God-speed in the work which they are doing, for their success is of as vital importance to us as it is to them.

To shut our eyes to the situation would be infinitely more absurd than the burying of the ostrich's head in sand that he may not see the dangers about him.

It is moral cowardice; it is a lack of a recognition of our rightful position, when, merely on questions of trade or commerce, we are, at this critical hour in the world's history, the most momentous since the sacrifice on Calvary, viciously, through demagogues and misguided politicians, as well as through the press, to some extent, assailing Great Britain.

In time of peace we might very well afford to thresh out with Great Britain any question whatever in which there is a difference, but in this hour of life-and-death grapple this is no time to play petty politics and to put ourselves in the attitude of the bully seeking to enforce demands on trade matters when we have not enforced demands where citizens of our country, innocent men, as well as women and children, have been deliberately murdered on the high seas.

If the nation permits itself to allow trade and commerce to rank on a par with human life and antagonize the Allies on a matter of trade when it has not enforced its vigorous demands in a matter of wholesale murder of its people, it would justly sink beneath the contempt of all mankind.

And there is another situation well worth studying; it would be folly to omit it. If the country were fighting a battle for the protection of human life, there are no limits to which we should not have

the moral and physical courage to go, but when we are endangering the world's civilization by attacking Great Britain because of trade conditions, we are embarking in a cause that cannot be morally justified and that may become perilous in the extreme. It may be said, advisedly, that there would be no proposition facing the Allies so simple as, through troops now in Canada or troops that might be landed from the Orient, to capture the entire Lake Superior district and within thirty days dominate the iron and steel and railroad interests of the United States. We do not believe that the Allies will be driven by our unwise attacks into such a retaliation, but the capture of the entire iron industry of the United States, outside of the limited amount in the South, would be the merest child's play and could be affected not only in less than thirty days, but in half that time, and he is a fool, in the study of the situation of this country, who does not recognize the truth of this.

Under such conditions, if the Allies were forced, by the constant denunciation from Washington and elsewhere of their work, to antagonize us, they would have a right to call upon Japan, their ally, to co-operate in this campaign.

The MANUFACTURERS RECORD is not an alarmist. It would prefer to see this nation go down like Belgium rather than fail to meet a moral issue such as that which might be at stake under some conditions, but it knows full well our helpless, hopeless dependence under existing conditions, and it merely urges this word of warning, not because it is affrighted, but because it would have the country know what is a possible outcome of the great mistakes that are being made in assailing Great Britain on present conditions.

If we want to go down in history as a country that put trade and commerce before human blood; if we want to go down in history as the country that failed in the supreme hour, when civilization was at stake, in standing by those who were fighting our battle for world civilization, then we need only go a little farther than we have been doing in attacking Great Britain.

Once to every man and nation comes the moment to decide In the strife of Truth with Falsehood, for the good or evil side;
Some great cause, God's new Messiah offering each the bloom or blight,
Parts the goats upon the left hand and the sheep upon the right;
And the choice goes by forever 'twixt that darkness and that light.
Truth forever on the scaffold, Wrong forever on the throne—
Then to side with Truth is noble when we share her wretched crust,
Ere her cause bring fame and profit, and 'tis prosperous to be just;
Then it is the brave man chooses, while the coward stands aside,
Doubting in his abject spirit, till his Lord is crucified.

SOUTHERN BANKERS TO CONFER ON COTTON HANDLING.

AN important meeting of the Southern Bankers' Cotton Conference is scheduled to occur at New Orleans December 6 and 7. The expeditious and profitable handling of the cotton crop is the subject to be brought before the conference, with the expectation that a negotiable warehouse receipt will be adopted. Prominent bankers from cities of eleven Southern States are expected to attend, and Dr. Bradford Knapp of the United States Department of Agriculture and W. P. G. Harding of the Federal Reserve Board are scheduled to make addresses. The conference is an outcome of a meeting of bankers held in Galveston some months ago at the instance of Mr. Joe Hirsch of Corpus Christi, president of the Texas Bankers' Association, who has long been prominently identified with a movement to bring about a closer co-operation between the bankers and the farmers of the country.

A GREAT CONSTRUCTIVE WORK THE INTERNATIONAL HARVESTER CO. IS CARRYING ON.

A BIG bundle of books laid on the editorial table attracted attention, and as one after another was examined, there was found a wonderful library on agriculture issued by the International Harvester Co. which seemed to justify the widest publicity we could give to the work.

In its Agricultural Extension Department the International Harvester Co. is doing a work in behalf of the agricultural and stock-raising interests of the South and the country generally that in its scope is so broad-gauged as to earn the hearty commendation of every public-spirited citizen. It is a work so comprehensive and thorough and so universal in its application that it might be compared with the work that a Government itself would be expected to undertake. Experts in various lines are employed in compiling and disseminating information on every variety of subject affecting the welfare of the farmer. Pamphlets, papers and books have been compiled giving practical information about soils, crops, poultry, livestock, weeds, home economies, etc. Many of these books are handsomely illustrated and are beautiful specimens of the printer's art. All of the publications cover simply and practically the subject to which they are devoted. These publications are obtainable in quantities or single copies, as desired, and are forwarded upon receipt of a price which practically represents the postage cost.

In addition to these books, pamphlets, etc., there is a series of practical lectures on agriculture, etc., with charts and slides for the use of speakers and lecturers. These charts and slides are loaned free to individuals or organizations, such as commercial clubs, chautauquas, farmers' institutes, clubs or granges, or to city or county superintendents of schools and teachers, State agricultural leaders, county agents, etc. The express charges to and from Chicago are all the costs involved. A two weeks' time limit is stipulated, but if circuits are formed the limit will be extended to such time as may be required. A lecture book goes with each set of charts and lantern slides. These have been prepared by the Agricultural Extension Department, under the personal direction of Prof. B. G. Holden, long a noted authority on agricultural matters, and first brought into public knowledge through his remarkable achievements in teaching the farmers of Iowa how to greatly increase their corn production per acre. Ten to fifteen charts make up a set. Stereopticon sets contain from forty to fifty lantern slides, plain and in colors. With each set of charts or slides there is furnished for the information and direction of lecturers a booklet outlining briefly the story of each chart or slide. A large number of sets have been prepared on the following subjects:

"Corn is King."
"Alfalfa on Every Farm."
"A Fertile Soil Means a Prosperous People."
"Livestock Farming Means Permanent Agriculture."
"Dairying."
"Greater Profit from the Oat Crop."
"Make More from Farm Poultry."
"Weeds Mean Waste."
"Home Economies."
"Dangers of the House Fly."
"Why Teach Agriculture in the Schools?"
"Diversified Farming for the South."
"The Forward Movement in Education."
"A Good Home Means Comfort, Profit, Pleasure."

Outside of the lectures and charts, the books, pamphlets and leaflets prepared by the Agricultural Extension Department of the International Harvester Co. include the following:

Studies in Alfalfa. A Teacher's Handbook Designed Especially for Use in the Corn Belt States. By Grace Marian Smith, I. H. C. Agricultural Extension Department.

Lecture Notes for Alfalfa Charts—Alfalfa on Every Farm. By Grace Marian Smith of the I. H. C. Agricultural Extension Department. From Lectures by Prof. P. G. Holden and His Associates.

Alfalfa to Replenish the Earth. A Sermon by Rev. John L. Watson.

Getting a Start with Alfalfa in the Corn Belt. By P. G. Holden. Alfalfa Excels Every Other Crop in Yield Per Acre.

In Feeding Value.
As a Drouth Resister.
As a Soil Enricher.

Make a Beginning—Start Now. Grow some Alfalfa. Alfalfa—Brief Cultural Directions for Growing Alfalfa in South Dakota. By H. M. Harden, Associate Editor the Dakota Farmer, Aberdeen, S. D.

The Rural Schools Should Test the Seed Corn of the Country. Scenes from work done in Cook county (Illinois) schools under direction of County Superintendent E. J. Tobin, Chicago. An extract from the I. H. C. Lantern Slide Lecture, "The Great Forward Movement in Education."

Seed Corn—Do You Know that It Will Grow? By P. G. Holden and J. E. Waggoner. Test—Don't Guess.

Harvest Seed Corn Before Freezing. The Schools Should Help.

We Must Feed Ourselves—Let Livestock Do Half the Farming. Grow Livestock—It Means Success in Spite of the Boll-Weevil. Better Soil and Greater Profits. More Pastures and More Legumes. More Humus and Less Washing. Feeding the Crops and Saving Fertility. Living at Home.

Diversified Farming in the Cotton Belt. By George H. Alford.

Results—We will co-operate with chambers of commerce, granges, farmers' institutes, bankers' associations and other organizations in whatever stands for the development of your community or State. We will furnish speakers, literature and competent men to assist you in organizing agricultural campaigns.

Testing Soil for Acidity.

Agricultural Charts and Lantern Slides for Speakers.

Saving Soil Moisture.

A Pig for Every Boy.

Making Money from Pigs in the South.

Poultry Is Profitable. Every Boy and Girl Should Have Some Chickens. Own Some Poultry.

Poultry—Utilizes Waste Products.
Destroys Insects.
Gives the Boy and Girl Something to Do.
Provides Wholesome Food.
Lessens the Amount Spent for Meat.
Is Always Marketable.
Gives You Something to Sell Every Week.
Keeps Your Store Bill Paid.
Let Poultry Keep You.

Grow a Garden.

Cold Pack Canning at Home.

A Silo with Every Barn. By W. R. Baughman and C. M. Carroll.

Diversified Farming for Arkansas.

"Grown in Mississippi." Suggestive Studies for Use in the Schools of the State.

For Better Crops in the South.

For Better Crops.

Binder Twine Industry.

The Story of Twine.

The Story of Bread.

The Golden Stream. The Selection of Good Cows. By Thomas F. Willoughby.

Creeds of Great Business Men.

The Disk Harrow. By F. B. Linfield, Superintendent of Montana Agricultural Experiment Station.

The Boll-Weevil—How to Prosper in Boll-Weevil Territory. By G. H. Alford.

Dip the Tick, and Dip Him Good.

A Few Facts About Agriculture. By Dr. Warren E. Taylor and Prof. Perry G. Holden.

Fly Catechism. Facts About the Common House Fly which Everyone Should Know. For Use in the Public Schools.

The Opportunity of the Town Lies in the Country. Corn, Wheat and Hay—Beef, Pork and Poultry. These are the Home Builders, the Builders of Great Cities.

Store Your Sweet Potatoes for Winter. You Don't Have to Lose Them. By J. W. Beeson, President Meridian College, Meridian, Miss.

Humus—The Life of the Soil. "The great storehouse of fertility in the soil is humus; here exists the supply of nitrogen, of moisture and much of the mineral matter that is in a condition to feed the plant."—Ladd. By A. E. Chamberlain.

Hog Cholera. Serious Losses Can Now Be Prevented by Treatment. By A. E. Chamberlain.

Keep the Hog Cholera Germs Away from Your Hogs. No Germs, No Cholera.

Sweet Clover—No Longer a Despised Weed—A Valuable Crop. By C. M. Carroll.

Helps for Wash Day—"Headwork Lightens Housework."

A Sewing Lesson.

The Study of Nodules.

Southern I. H. C. Demonstration Farms. By G. H. Alford, Superintendent.

I. H. C. Demonstration Farms in the North. By J. C. Hancy, Superintendent.

Knocker or Booster?

Initiative. Elbert Hubbard.

Directions for Making and Using Stenciled Charts from I. H. C. Pattern Stencils.

List of Farmers' Bulletins on
Gardening and Trucking. Soil Fertility.
Farm Crops. Farm Engineering.
Fruit Growing. Sanitation and Health.
Stock Raising. School Agriculture.
Poultry. Good Roads.
Domestic Science. Business Farming.
Insect Pests and Weeds. Farm Improvements.
Dairying. Miscellaneous.

Fight the Fly.

We are glad to give this space to a work of such splendid possibilities for the South.

ONE SPECIFIC ILLUSTRATION OF THE VALUE TO THE SOUTH OF WAR ORDERS.

THE announcement made some days ago that the war orders received by the Poole Engineering Co. of Baltimore now amount to over \$17,000,000 is an indication of what might have been possible and may yet be possible in the South if the big machine shops of this section, with the hearty support of the railroads and the financial interests, can in co-operation secure such work through J. P. Morgan & Co., the agents of the Allies.

The immense contracts to this one Baltimore company are also indicative of the magnitude of many contracts secured by Baltimore concerns for a wide variety of war supplies, from cotton duck and machinery and shrapnel and guns to acids. Included in the contract of the Poole Company are 147,000 12-inch shrapnel shells. These are said to be the largest ever made in the United States except by the Government. Each shell weighs over 800 pounds and is loaded with more than 12,000 half-inch leaden bullets. A large number of smaller shells have also been contracted for, as well as some rapid-fire one-pounder guns.

The ability of the Poole Company to handle this business is due in part to the fact that for nearly three-quarters of a century this concern has been one of the representative manufacturing plants, not only of Baltimore, but of the country. It was founded in 1842. What is known as its "new shops" were begun in 1851 and were the nucleus of the present great plant. While this company has, through all its history, been one of the leading industrial enterprises of the country and has done some of the biggest work ever turned out by any machine shop or foundry in the United States, these new contracts have given it an opportunity for great expansion. It is now running its plant on three shifts, working night and day. It is adding very largely to its present plant and increasing its equipment, much of which is being built in its own shops.

The history of the company is intimately associated with the development of ironworking interests in the country. It was at these shops that the ironwork was made for the dome of the nation's capitol at Washington. Here was built the giant sand wheel, known wherever manufacturing is known, for the Calumet and Hecla Mining Co. The diameter of this wheel is 65 feet; its weight about 500 tons. The axle or shaft was forged at Krupp's works in Germany, and was 26 feet long and 32 inches in diameter, weighing 42,000 pounds. All of the finishing work on it was done in these shops.

For many years the company has done a large amount of work for the United States Government, including disappearing-gun carriages and other ex-

pensive and high-class work requiring the greatest technical skill.

A walk through these great shops is something of a revelation to all Baltimore people who have not kept in close touch with the industrial activities of this city. A study of the plant is especially interesting as one notes the exceptionally strong native American mechanics who are employed. Around this plant has grown up a considerable village, and one generation after another has been trained in these shops. Whether there is a foreigner employed in these shops or not, we do not know, but every man looks like a native American, and the splendid skill displayed in the work that has been turned out is a testimony to their ability as high-class mechanics.

The orders, now aggregating over \$17,000,000 for shrapnels and guns, furnish the basis for a justifiably very great increase in the plant, for when the war is over it is absolutely certain that this Government will, for some years to come, have to call very freely upon all the munition-making plants in the United States in order to provide some degree of preparedness to overcome our present helpless condition. Moreover, the equipment that is used in filling these war orders is the equipment that is needed for a very large part of great iron and steel working operations, for the building of heavy machinery, and every plant which is enabled, by virtue of these big war orders, to expand its facilities puts itself far ahead in the scheme of development and helps to advance the nation's industrial equipment. It is for this reason that the MANUFACTURERS RECORD has persistently urged that every man interested in the welfare of the South and in the broad expansion of its metallurgical interests should endeavor in every way possible to encourage Southern enterprises in securing war orders. The vast war business is lifting the entire iron and steel and kindred interests of the East and the West to a higher plane than they would have been able to attain in the next five or ten years without such a stimulus. These magnificently-equipped plants, which have been constructed as additions to existing operations, will furnish facilities for doing business such as many of these concerns would not have had in the next ten or twenty years.

The South has lagged behind in this work. Here and there new orders have been received. One of the most promising movements in this respect is the organization for establishing a munition-making plant in Anniston, and, in connection therewith, the building of an electric furnace for making high-grade steel. This plant has taken over a car works which some years ago was not only the greatest industrial plant in all that vicinity, but was one of the foremost car-building plants in the country. It has been idle for several years. But it can be properly equipped to bring these facilities up to date to take care of orders already received, as well as others that may come later on as a result of this work. And yet the aggregate of war orders received south of Baltimore and Richmond is exceedingly small. The big locomotive works at Richmond are, it is reported, employing over 3000 men in filling war orders. The aggregate orders received in Baltimore for all kinds of materials for war purposes will probably reach \$50,000,000.

The South ought to be at work vigorously and aggressively to secure more of this business, not merely for present profits, but for the tremendous uplift it would give to its metallurgical interests and to the creation of plants which this country will need in the making of war supplies for preparedness against war.

MATERIAL PROSPERITY IS NOT THE HIGHEST AIM.

REFERRING to a telegram from the MANUFACTURERS RECORD congratulating Anniston on the establishment of an ammunition plant, the Evening Star of that city, to which the telegram was sent, expresses its appreciation of it, but adds the following:

In the complete statement issued by Mr. Edmonds he makes it clear that he is emphatically pro-ally in his sentiments as regards the war. This, however, is his personal

opinion, and the people of Anniston were not concerned with this matter in their efforts to locate the big industry here. We are primarily concerned with the upbuilding of Anniston, and it is of little moment to us how the ammunition we make is used so long as the payrolls incident thereto make for our material prosperity.

We think the Star has hardly stopped to consider the proposition carefully when it says, "It is of little moment to us how the ammunition we make is used, so long as the payrolls incident thereto make for our material prosperity." That would indicate a lack of appreciation of moral responsibility in business affairs which we do not believe that the Star or the people of Anniston are guilty of in the slightest degree. The individual who does not care how his product is used, whether for weal or woe of mankind, so long as it brings payrolls for his material prosperity, is on the down-road to ruin. The business concern that produces death-dealing instruments of war merely for the money that is in it, and without regard in such a situation as the present, to his own views for or against the contending countries, would show a lack of moral backbone which we are quite sure does not exist among the chief munition makers of the day. The president of one of the greatest concerns engaged in making munitions of war, whose orders amount to probably \$100,000,000 or more, wrote the MANUFACTURERS RECORD some months ago that the reason he and his associates accepted these orders was because they believed that they were helping the Allies to fight the world's battle for civilization. We are absolutely certain that that concern would not have accepted orders contrary to the moral views of its owners and managers if there had been a profit of a hundred million dollars in the orders, provided these materials were to be used contrary to what they believed the moral right of the question. The same thing is true as to other great concerns.

In times of peace men have engaged in the making of guns and cannon as a purely commercial proposition, taking no account of the possibility of future wars, and selling their products to any buyers. But in a time such as the present, when the nations of Europe are in a great death struggle, and when many moral issues are involved, there are very few men in the business who would be willing to sell munitions to the countries which they honestly believe to be in the wrong. There is a mighty amount of moral strength in the iron and steel and munition making business of this country and the men who are engaged in producing war supplies; at least those in the iron and steel industry are to a very large extent doing it with a free conscience and a firm belief that they are doing a great work for humanity. Their views on this subject are infinitely higher than that suggested by the Anniston Star when it says that it is of little moment "how the ammunition we make is used, so long as the payrolls incident thereto make for our material prosperity." This is not the standard of ethics of the majority of people in the South nor in Anniston.

We do not think that in the annals of the newspapers of Alabama there has been a greater slur upon any community by its own paper than this statement of the Anniston Star, and yet we do not believe that the Star really expressed its own convictions, but only a thoughtless statement of a vital matter, for we have a higher opinion of the Star than to judge it by the standard it set forth.

CYANAMID PLANT IN SOUTH CAROLINA TO BE STARTED UP.

THE announcement is made that the Southern Electro-Chemical Co. will start up its plant at Nitrolee, S. C., for the manufacture of nitric acid by extracting nitrogen from the atmosphere. While this is a plant of limited capacity, erected several years ago for experimental purposes chiefly, and not having been operated continuously, the great increase in the price of nitric acid justifies the operation of the plant commercially. Hydro-electric power, furnished by the Southern Power Co., is utilized in the process. Mr. J. B. Duke, president of the Southern Power Co., is interested in the Electro-Chemical Co., and it was through his initiative that the plant was established.

PAYING THE PENALTY OF FIGHT AGAINST RAILROADS.

NO one can pick up a newspaper these days without being impressed with the attention that is being given to the tremendous expansion in iron and steel, and to the enormous increase in freight traffic which is taxing the capacity of many of the railroads of the country. This condition prevails at the very beginning of what may be called the boom period. It merely fulfills the predictions of the MANUFACTURERS RECORD for many years to the effect that whenever there came another great burst of activity in business the railroads of the country would be wholly unequal to carrying the traffic.

We have hampered and starved our railroads until it has been well-nigh impossible for them to keep in adequate physical condition or to plan for years ahead, as they must do if congestion is to be avoided by providing larger terminal facilities, more adequately equipped with labor-saving devices; more double track and more of all the essentials necessary for the proper handling of traffic. The country is already, in the shortage of rolling stock and the congestion of traffic, beginning to pay some of the inevitable penalty of its fight against railroads.

The iron situation has been stimulated, of course, by war conditions; but the present activity in iron and steel would have come before this if it had not been for the bitter fight made against railroads by the Government and by the politicians, and, unfortunately, by many business men who ought to have been better informed. At the very beginning of this great movement in iron and steel, which, under ordinary conditions ought to continue with increasing activity for the next four or five years, we are face to face with a threatened shortage in iron ore, a possible shortage in coke, and the certainty of congestion on railroads, making the delivery of ore and coke much slower than would be the case under better conditions.

An interesting summary of the iron situation as it at present exists is in a letter from the Matthew Addy Company, a well-known iron-handling firm of Cincinnati, which presents the following facts:

We—the United States—are now making approximately at the rate of 37,500,000 tons of iron a year. But because the first half of the year was dull, the year's output will not much exceed 31,000,000 tons. In 1913 we had up to that time the greatest production—30,966,000 tons. Taking the statistics by periods of ten years, we find:

	Tons.
1905.....	22,992,000
1895.....	9,446,000
1885.....	4,044,000

In a period of thirty years the increase in iron production has been nearly 900 per cent. To get a comparative view of these figures in 1913—the last normal year abroad—the pig-iron production was:

	Tons.
United States.....	30,966,000
Germany.....	19,004,000
England.....	10,482,000
France.....	5,227,000
Russia.....	4,475,000
Other countries.....	7,873,000

And in the whole world..... 78,027,000

So today, on the face of the returns, the United States is making half the iron which the whole world produced two years ago. As a matter of fact, the production of iron has been so greatly reduced in Europe by the war there is no doubt that we are now producing a great deal more than half the iron which civilization is making at the present moment.

Iron prices are higher than they have been since 1908, but they are \$5 a ton lower than they were in 1907. Speaking in a general way, prices are now about where they were in the early part of 1906. There is nothing abnormally high about them. Looking over the records, it seems fair to say that today the quotations on iron are about in line with what they were previously during periods of active business.

There is no sign of any change in the situation. On the contrary, as time goes on the market becomes stronger. The demand for raw material is more and more insistent. And with the steel mills they are now hopelessly behind on orders. One concern that needed steel for rush work told us that they had paid a premium of \$15 a ton in order to secure it. The price paid for steel abroad is so great that American consumers are finding that they, too, must pay war-time prices. Pig-iron buying continues on a large scale. Everything is in demand. There is beginning to be much complaint because of a lack of cars in which to ship.

Ore Shortage May Cause Some Steel Plants to Shut Down

[Special Correspondence Manufacturers Record.]

New York, Nov. 30.

Just at the time when the steel industry of the United States finds the entire world seeking American products at prices higher than those of 1909 and 1912, a possible shortage of ore may cause some furnaces to go out of blast and some steel mills to close down.

And this, too, at a period when any steel plant in position to accept orders for near delivery may practically name its own price.

This possible scarcity of ore, which actually threatens to reduce production in certain quarters during the winter months, applies of course to that large percentage of the steel industry which depends for its ore supplies exclusively upon the Lake Superior district. Information at hand here indicates that a number of Western blast furnaces failed to contract for ore before the great wave of prosperity rolled in.

Some of these will, in consequence, have to close down until spring when their present supply of ore is exhausted. Other blast furnaces are facing a dearth of coke, and for that reason may be compelled to close.

The end of the ore season on the Great Lakes will find, say experts, less than 10,000,000 tons of iron ore on the docks at lower Lake ports. It may be as low as 8,000,000 tons. Only once in the history of the steel industry has the ore on docks at the end of the season reached 10,000,000 tons. That was in 1912. Last year the surplus on docks was 9,345,871 tons, and in 1913 it was 9,261,676 tons.

These prospective hindrances to steel production at a time when the demand far exceeds productive ability to supply shows the urgent need for development of iron and steel industries in the South. With both ore and coke supplies indicating a slightly lessened activity later, the demand for steelmaking iron grows greater than ever. Congestion at the New York port because of ship tonnage capacity too small to meet the tremendous increase in export shipments is causing a back-up of freight which reaches from New York to Pittsburgh, New York to Buffalo and New York to Scranton for different classes of export shipments.

This freight congestion, which is acute enough to cause the Lackawanna to declare an embargo on all freight intended for export, is already interfering with production at both steel plants and blast furnaces. While steel manufacturers anticipated the embargo, it is hoped it will not grow more serious. Other roads entering New York, while crowded to the limit, are handling all freight offered.

The action of the Canadian Government in commandeering all wheat of the required export standard in elevators between Port Arthur and Halifax may help the freight situation here. Much of the 20,000,000 bushels thus commandeered will go out through Portland, Me., and the greater part of it through Halifax and St. John, but some must be sent through New York to reach its final destination in Great Britain or France.

The trouble at the port of New York is chiefly due to the current abnormal volume of exports, rather than a scarcity of ships. Exports are going out in tonnage and volume fully 33 per cent. above any normal seasonal figure. This means that more ship tonnage is actually being offered and used than ever before.

Although Germany's merchant marine has been swept from the seas, and Great Britain and France, in addition to heavy losses in war, are using much of their tonnage elsewhere, the amount of export matter daily leaving this harbor is the greatest in history. The upper bay is full of vessels loading from lighters, and on one day last week 11 vessels sailed from here carrying 60,000 tons of cargo.

Manufacturers' Commission Proposed to Study Needs of France.

Officers and directors of the American Manufacturers' Export Association have under consideration a plan to create a commission to visit France and study at first hand what is needed to modernize its national industries after the war.

This is one of the first results of the mission here of the members of France's Industrial Commission, now in

this country. Seeking to secure here machinery of modern make to place manufacture and agriculture in France upon a world's competitive basis, the Commission has presented so many dazzling trade prospects that American manufacturers are keenly alive to the possibilities.

To take away from Germany and to place with American manufacturers a business prize variously estimated to be worth from \$150,000,000 to \$200,000,000 a year is stimulating to the American business mind. It appeals especially to the American Manufacturers' Export Association, conducted by representatives of America's greatest corporations and formed to foster foreign trade.

Edward M. Herr, president of the Westinghouse Electric Manufacturing Company, who is also president of the American Manufacturers' Export Association, is the author of the plan to send an American commission to France.

On this point President Herr said: "These gentlemen have come to us on a mission of the broadest scope, and to us as manufacturers of the very greatest interest."

"They are interested in an effort looking ahead for years to come as to what might be done to help the industries of France build up; to rejuvenate France industrially, as it were. They are also looking toward the improvement of agriculture and commerce generally."

"It is going to be increasingly important after the close of this war that they may be provided with more machinery, so that instead of doing so much by hand a man can produce much more by the aid of machinery than he is now producing without its aid."

"The industries of the United States should be able to help France in the time of her need. I know that all who are interested in American manufactures will gladly welcome the opportunity to do what we can to aid her."

"But it is not going to be sufficient for us simply to offer them the machinery that we use with advantage. We must study their needs, we must follow their requirements, and that is something that will take some effort on our part."

"I suggest, that inasmuch as France has sent to us this very distinguished commission of able men, we should take thought as to how we may form a commission who might return their visit and study, on the soil of France, the actual needs that these gentlemen have come here to provide for."

"We must meet France's needs or we cannot expect their business. We want their business and we must make the effort to get it."

"I am sure we are fortunate in the relations that have been established by the great Anglo-French loan recently negotiated here. That brings us in closer touch with the people of France and will enable us, through our bankers and others interested, to more clearly understand the peculiar needs of the people of France."

Among the directors and officers of the association who are considering President Herr's suggestion of organizing a commission to send abroad are:

James A. Farrell, president U. S. Steel Corporation; W. S. Gavan, Dupont de Nemours Powder Co.; Geo. E. Long, Joseph Dixon Crucible Steel Co.; Lindsay McCandlish, Hutchinson Coal Co.; H. K. Mulford, H. K. Mulford Co.; M. A. Oudin, General Electric Co.; W. W. Nichols, Allis-Chalmers Mfg. Co.; A. N. Hargrove, J. G. Brill Co.; L. Moen, C. W. Hunt Co.; E. H. Huxley, U. S. Rubber Export Co.

Action on the plan may be expected soon. Developments in the general world trade situation as affecting the future of the foreign trade of the United States with respect to trade zones after the war are being followed as carefully by big business interests as are the movements of armies by the military experts.

Advancing Prices in Birmingham Iron Market, With Increasing Demand.

Birmingham, Ala., November 27.—[Special].—There are two distinct periods in the pig-iron "game" that border on the exhaustion of resources—one when the manufacturer has to tax his capital and energy to sell

his product, the other when business comes in, un solicited, at such a rate that his combined efforts, producing capacity and pro rata distribution of tonnage are taxed. For the past six to seven years the pig-iron producers have had a fair sample of the first mentioned conditions, and today witnesses the turning point in the "long lane" that they had come to believe "had to turn," giving them a glimpse of the last-named conditions. On account of the tremendous demand for steel-making irons, the pig-iron market has been automatically "shoved up," and not so much from the demand of manufacturing cast-iron foundries. These large interests, however, saw the trend of things and came in for round lots of iron, preferring to take their chances on improved conditions in their line during the coming year; hence large buying resulted, which kept pushing prices up. The smaller foundries have stayed out, hoping that there would be a "check," but there has been none, so at this late day they have begun their buying, and from all present indications the market is due to go up another 50 cents to \$1 per ton before the close of the present year. The largest iron-producing interest in the district (while not a large factor in the foundry producing end) elects to quote \$13.50 per ton at the furnace, yet there is no evidence of any tonnage that can be learned of being booked on this basis by them. On the other hand, several thousand tons are recorded booked by other interests on basis of \$14 per ton at the furnace for first and second quarter delivery of 1916. Sixteen hundred tons of special analysis iron was sold during the week at \$16 per ton at the furnace. One large concern asked for 3000 tons of this grade of iron, but on account of previous bookings the company could not see its way clear to taking on more than 1500 tons of this quantity. The Alabama Company, which has been way repairs to its No. 1 furnace at Ironaton, which formerly ran on special analysis iron, preparatory to blowing it in on January 1, has already booked several thousand tons of its Etowah brand of iron for delivery next year on basis of \$14 per ton at the furnace. In the Birmingham district, including basic iron, production at present is around the 200,000-ton-per-month mark. According to figures compiled up to November 1 of this year, pig-iron production in the United States was at the rate of 37,500,000 tons per annum, and with the additional stacks that are being built and others repaired, next year is sure to witness a 39,000,000 to 40,000,000-ton production in the United States. Another important feature of the iron market in the Birmingham district is the fact that three or four months ago the producing interests were making coke at such a rate that it could not be consumed for furnace trade, and was being thrown on the market. Today two of the large iron-producing interests are buying coke on the outside for their furnaces. Therefore, in the course of time this situation will add impetus to the coal market, which has been stagnant for some months. I do not believe that I have ever seen as much optimism and enthusiasm manifested by the pig-iron producing interests of the district as is in evidence today. The situation is now beginning to reach the point that producers have dropped the argument that such conditions prevail on account of munition orders, and rather take the view that the substantial foundry business of the country is coming in for its share of prosperity outside of munition orders.

Along with the rise in pig-iron has come an advance in foundry and furnace coke. Furnace coke is quoted from \$2.65 to \$3 per ton at the ovens, and foundry coke from \$3.25 to \$3.75 per ton at the ovens for next year's business.

Y. A. DYER.

The Consumers' Portland Cement Plant.

Final details are being determined for the construction of the Consumers' Portland Cement Co.'s plant, recently announced as to be built at Foreman, Ark. The company has organized with officers as follows: President, Albert Graff, president of the Albert Graff Concrete Construction Co.; vice-president and treasurer, Edgar S. Bell; secretary, Dilno D. Johnston; all of Chicago, with offices in Lumber Exchange Building. This plant is to include fireproof buildings, machinery electrically driven by electric motors, etc., for a 24-hour capacity of 2000 barrels of Portland cement. Hydrated lime and fertilizer lime will also be manufactured. The Fuller Engineering Co., Allentown, Pa., and New York, has contract to construct and equip the plant.

A Billion Dollars in Loans by United States Bankers to Europe

[Special Correspondence Manufacturers Record.]

New York, Nov. 29.

With the announcement by Frank A. Vanderlip, president of the National City Bank, that the committee of New York bankers of which he is chairman had approved a new loan of \$50,000,000 to London banks, the loans of American bankers to the Allied nations and Europe crossed \$1,000,000,000.

Prior to Mr. Vanderlip's statement a loan of \$80,000,000 to Russia had been arranged for by a syndicate of bankers here and in Boston, and large subscriptions from American sources had been made to the new "Victory Loan" of the French Republic.

Bonds of the British Government to the amount of \$55,000,000 have been deposited with the Bank of England as collateral for the loan which Chairman Vanderlip and his committee have accepted. The proceeds in dollar funds are to be used for strictly commercial purchases and the eight London banks are to pay 4½ per cent. on a six months' time period. Arrangements for distributing this loan among American bankers are now being made.

For a 90-day loan of \$60,000,000 Russia will pay 5 per cent., and for every renewal thereafter 1 per cent. additional. Its rate for a loan for 12 months would therefore be 9 per cent. It has the option of extending the loan up to 18 months from its date.

With the United States investors now having more than a billion dollars invested in the credit of the belligerent nations fighting on the side of Great Britain and France, war developments take on renewed and vital interest.

The task of distributing the various bond and note obligations of indebtedness of the many countries now owned in New York is currently undertaken by nearly every standard bond house in New York and elsewhere. To catch the "Christmas trade," so called because of the season, extraordinary efforts are to be made within the next 60 days to place the bonds in the hands of as many individual investors as possible.

Accurate estimates of the interest and dividend payments to be made by American corporations during December and January give an approximation for the two months of \$450,000,000. This year, due to the war and the heavy liquidation on the New York Stock Exchange of American securities owned in Europe at the outbreak of hostilities, a greater part than ever before of year-end interest and dividend disbursements will be made to Americans.

It is to capture a good portion of this vast sum and to show the owners thereof the wisdom of investing in bonds a part of their surplus that the present campaign is being made.

The British Chancellor of the Exchequer, in his latest official figures giving the capital of the British Empire as \$130,000,000,000 and its annual income as \$20,000,000,000, has directly added to the many strong arguments which the leading bond houses have been using to show the yield, stability and security of the bonds. The total wealth of the United States is only \$187,700,000,000.

They are joint and several obligations of two of the richest nations in the world, yielding as now being offered around 5½ per cent. Many of the houses are laying particular stress upon the fact that they are government convertible bonds.

The possible value of the conversion privilege in such bonds, obtainable in denominations of \$100, \$500 and \$1000, payable at maturity in 1920 in United States gold coin, or convertible at par at any time before maturity into 4½ per cent. bonds with precisely the same security and maturing in 1940, is by comparison of decided interest. At the highest price for consols the equivalent price for a 4½ per cent. bond over a 50-year period would have been 126.

It is figured that an American bondholder converting his holdings at maturity into the long-term bonds of the combined British and French governments will secure an average annual income return of 4.82 per cent. for 25 years. But this income yield will be increased should the bonds be redeemed before maturity.

As the interest charge on the whole issue is approxi-

mately only ⅓ of 1 per cent. of the combined annual income of the people of the two countries, and amounts only to about 1½ per cent. of the total revenue of the British Government alone, the great bond houses report few demurs as to the security.

Among the bond houses active in distributing the Anglo-French issue at this time are:

A. B. Leach & Co., Harris, Forbes & Co., Kidder Peabody & Co., Hornblower & Weeks, Blair & Co., Dominick & Dominick, Potter, Choate & Prentice, Spencer Trask & Co., Clark Dodge & Co., Harvey Fisk & Sons, Winslow Lanier & Co., Kountze Bros., Mann, Bill & Co., Procter & Borden, Tefft & Co.

An interesting situation exists in the New York bond market. Practically all short-term issues have been absorbed. There is every indication that the buying power of the United States has overtaken foreign liquidation. Because of the volume of this liquidation, due entirely to the war, the lowest price for bonds in many years was reached on the down turn.

Now the upward trend in prices has come. There is good demand, for instance, for railroad bonds, and new issues are being provided for. Speyer & Co., J. & W. Seligman, The Guaranty Trust Co., and Lee Higginson & Co. will provide the Frisco Railroad with a \$25,000,000 loan, while Kuhn, Loeb & Co. and Speyer & Co. will take \$60,000,000 5 per cent. refunding issue of the B. & O.

American manufacturers and producers, who will send abroad this calendar year exports worth not less than \$4,000,000,000, thereby breaking all records and all guesses, are making it possible for the investing markets to boom. Other nations are buying so much from us that domestic investors must look largely to our own securities for putting surplus funds to work.

The United States will set a new world record for foreign business this year. The total of American foreign trade will likely approximate \$5,500,000,000. Of this staggering amount probably not more than 34 per cent. will be imports.

KEEP THE COTTON ACREAGE DOWN.

Every Business Man as Well as Farmer Must
Work to Maintain Diversification.

By E. E. MILLER, Cleveland, Tenn.

The agricultural and industrial interests of the South have one big job cut out for them the coming winter and spring—to see to it that the good prices for cotton are kept in their true perspective and that the cotton acreage next year is kept down to a reasonable figure.

Whenever an unusually big cotton crop is made and prices go down there are meetings and speeches and newspaper articles galore to encourage farmers to diversify their crops and reduce the acreage planted to cotton. This is all very well; the advice so freely offered at such times is good advice any year; but to offer it when the farmers are suffering from the effects of a cotton debauch is a good deal like locking the door after the horse is stolen. The time they most need to be reminded of the folly of "all cotton" is in such a season as the present, when there is a very real temptation to plant more cotton and so bring about another period of low prices and loud complaint.

The new banking system, it is true, offered the farmers of the South a chance this year to finance their cotton crop for the first time. The ability to secure money on cotton, combined with State-supervised warehouses that will enable the cotton to be recognized by anyone as good collateral, will do much in any future year to prevent the sacrifices, so common in the past, of a large part of the cotton crop at unnecessarily low prices. However, unless the farmers who raise cotton maintain the independence of the cotton crop they have acquired this year, they will suffer grievously from overloaded markets in future years of big production. There are some

things no currency or warehouse system can do, and one of them is to make financially independent the man who has spent his summer producing a cotton crop and living off the prospect of that crop while making it. Next year must see even more attention given to grain crops and stock husbandry if the Southern farmer is not to lose some of the ground he has gained this year in his struggle toward independence and permanent prosperity.

Every man who has influence with a single cotton-planting farmer needs to preach the gospel of diversification with all his might from now until next cotton-planting season is over—and not only to preach diversification, but to do what lies in his power to make it feasible and immediately profitable.

When a season of very low cotton prices, with its attending business depression, comes to the South, it is the usual thing to say all sorts of hard things about the all-cotton farmer and to blame him for the calamity. This is not altogether fair. He has grievous sins to answer for, it is true, but he is not necessarily a greater sinner against good farming and economic stability than all who dwell in the land with him.

It has not been easy in many cases for these farmers to change their methods and their system even when they realized that such a change would, in the long run, be best for them. Too often the whole economic structure of the community has been built on the basis of practically exclusive cotton-growing, and landlord, merchant and banker have been as much to blame for its continuance as the man who drove the mule and scattered the seed in the furrow. It has required some imagination and foresight for the Southern merchant selling goods on time at exorbitant prices to cotton planters, or the Southern banker, lending money at excessive rates of interest and often holding both merchant and planter under his thumb, to realize that the financial independence and genuine prosperity of the farmers would, in the long run, be to his permanent advantage also. Too often this merchant or banker has failed to exercise the requisite imagination and foresight and has been an upholder of the old system, even while condemning it. The merchant who has preferred selling bacon to his farmer customers to buying it from them; the banker who has been willing to risk money on future cotton crops, but not to help develop grain and livestock farming; the board of trade that has provided a market for the farmer's cotton, but made no effort to help him supply local needs with his home-raised produce, are all equally to blame with the all-cotton farmer for the continuance of the one-crop system and the economic dependence of the agricultural South. They must reform as well as he.

Nor are the agricultural leaders—the colleges, the experiment stations, the farm papers—of the South altogether free from blame. Too many of them have seemed to take it for granted that the one-sided agricultural structure of the cotton belt could stand indefinitely, and have talked lightly of diversification of crops as a desirable thing instead of using all their powers to make the farmers see that a change of the whole farming system of the South was imperative. The efforts of some of them in 1914 to blame everybody but themselves for conditions was ludicrous as well as pathetic. There is not, it is safe to say, an experiment station in the whole South that has not devoted more time and attention to fertilizer experiment—conducted with an eye to the returns for a single year, or to variety tests—nearly always of only local application—than to working out and demonstrating by actual experiment the safe and practical methods of changing from cotton farming to general and livestock farming. Not one of them has made more than a respectable beginning at the sorely-needed study of pasture crops and pasture management in the cotton country. The need of greater independence from the slavery of the "cotton-before-all" idea is not confined to the farmer.

It has been said before, but it will bear repeating, that the hope of the business South is in the development of a system of general and livestock farming suited to this section. Great progress along this line has been made in recent years, but it has not been altogether a steady progress. Last year's cotton slump was the occasion of a great advance. The job cut out for every business man just now is to see that there is no retrogression and no slack in the progress next year, but that the cotton acreage is kept down and the advance toward prosperity continued without a break or halt.

"Industrial Preparedness Must Be the Watchword"*

WITH GREAT OPPORTUNITIES HAVE ALSO COME GREAT DANGERS —
HELPFUL SUGGESTIONS FROM FEDERAL TRADE COMMISSION.

It is a source of gratification for me to be with you here tonight, primarily because you are a group of business men who have been doing things, individually and collectively. There is a bond of fraternity among business men. You may not always be able to put your finger on it exactly, but it is there. It comes from having dealt with problems common to all business and from a knowledge that every business man has had to go through the same ordeal. Every man who has had to meet a payroll has served his initiate in the fraternity and is in possession of its grand hailing sign.

Your organization has to deal with one of the largest factors in modern business life, advertising, a factor that is indispensable to success and that is developing into a veritable art, if not a science. Not all of us understand it thoroughly so far, nor have we all got to the point where its full indirect as well as direct benefits are manifest to us. For example, I do not think that all of us fully appreciate just how much the advertising man can do for us.

It is a curious anomaly that it is more difficult to sell anything to a man engaged strictly in the selling game than to any other class of business men. "That fellow thinks he can teach me something about my business," is the resentful remark one is apt to make when the advertising man sends in his card. But that is the wrong attitude to take. It may be that the advertising man has something he can teach, something gathered out of his broad outlook on the entire business world. It is a safe rule always to see him anyhow, and give him a hearing, for the germ of a great idea has been sown in just such conversations as these. In addition to this, business courtesy is served by seeing him. Right here let me interject the remark that courtesy is the cheapest thing a business man has to distribute and gets him more for the investment than anything else. Honesty in advertising is also an asset. I am particularly pleased to see advertising men taking so decided a stand against dishonest advertising methods. It is one of the most hopeful signs of the times, also an indication that the competition of the future is to be conducted upon a higher plane.

It is probably true that the American business men lead the world in the matter of extending sales through advertising. If you gentlemen did not have a sound knowledge of it you would not be spending on advertising \$50,000,000 a year, as I understand the members of your organization are doing. The problem of how, when and where to advertise has been pretty well solved. But there are other business problems to be solved.

The work of the advertising man is tied up closely with that of industry in general. Prosperous factories and busy stores mean advertising; the problems that affect merchants and manufacturers relate directly to prosperity in the field of advertising. Naturally you are interested in the conditions that make business prosperous, and the relation of government to business.

Government and business are and should be mutually helpful. Through a period of years the government has been gradually extending its machinery of helpfulness to different classes and groups upon whose prosperity depends in a large degree the prosperity of the country. To adjust, adjudicate and determine the questions that arise between shippers and carriers the Interstate Commerce Commission has come into being. The railroads and the shippers alike can secure prompt and definite rulings as to what they can and cannot do. The fruit growers of the country, the farmers, the farmers' co-operative elevator associations, the dairy producers' associations, all of which are co-operating and working to benefit their conditions, receive aid, advice and rulings on important questions from the Department of Agriculture. Now the bankers, through the Federal Reserve Board, can receive authoritative decisions as to their powers and duties, all of which is of general benefit to the whole country.

To do for general business that which these other

agencies do for the groups to which I have referred was the thought behind the creation of the trade commission. To make that thought clear I will quote from the President's statement on the subject:

"The business of the country awaits also, and has long awaited and has suffered because it could not obtain, further and more explicit legislative definition of the policy and meaning of the existing anti-trust law. Nothing hampers like uncertainty, and the business men of the country desire something more than that the menace of legal process in these matters be made explicit and intelligible. They desire the advice, definition, guidance and information which can be supplied by an administrative body, an interstate trade commission. The opinion of the country would instantly approve of such a commission. It demands such a commission only as an indispensable instrument of information and publicity, as a clearing house for the facts by which both the public mind and the managers of great business undertakings should be guided, and as an instrumentality for doing justice to business where the processes of the courts, or the natural forces of correction outside the courts, are inadequate to adjust the remedy to the wrong in a way that will meet the equities and circumstances of the case."

The Federal Trade Commission is desirous of being helpful to business to the extent of the powers granted by Congress. In the different problems that are being submitted to us we find the business men anxious to present the facts, with the hope that they can be shown the right road to take to expand and develop their industries within the law.

One of the ways in which the Federal Trade Commission may help business is to gather, collect and make known the essential data regarding business. A friendly survey of the field of industry, with attention to industries in which conditions are not right, will be of great value. Just the simple statistics regarding business, never previously collected, are of immense importance, and when compiled and distributed to business men will be a most useful guide for their future action. The Trade Commission has under way at the present moment the preparation of figures showing the size of our various business units. While this work is not yet completed, some significant items are beginning to appear.

Leaving out of consideration the banking, railroad and public utilities corporations, and referring only to those that have to do with trade and industry, we find that there are about 250,000 business corporations in the country. The astonishing thing is that of those over 100,000 have no net income whatever. In addition 90,000 make less than \$5000 a year, while only the 60,000 remaining, the more successful ones, make \$5000 a year and over.

Turning now from net income to the total volume of business done by these 60,000 corporations, we find that 20,000 have sales of less than \$100,000; 20,000 more sell from \$100,000 to \$250,000; 10,000 additional from \$250,000 to \$500,000; 5000 corporations ship annually half a million to a million dollars worth of goods; 4500 have total sales from a million to five million dollars; while only 462 industrial and mercantile corporations in the United States do an annual business of \$5,000,000 or more.

These striking figures exhibit a condition which has existed for many years. They show conclusively that big business, while important, constitutes but a small fraction of the trade and industry of the United States. They make clear that there is an unduly large proportion of unsuccessful business concerns. Do they not need help? Why have we not paid more attention to small and middle-sized business? Is it not worthy of our consideration? What measures are we to take to improve these conditions?

Speaking generally, the real, constructive help must come from within. You know, and I know, that lumping all business together, the real need is for better business methods. When we were all working on a large percentage of profit, and when it was a case of filling orders at our own price, we didn't need any help.

But, gentlemen, that day is past. We now have to get down to the hard facts of business, to learn precisely what they are, where the weaknesses and losses exist, and practice the same thoroughness which characterizes trade and industry in Europe. We need to study standard systems of bookkeeping and cost accounting.

The fact must be admitted that in order to put a selling price on a product a manufacturer must first know exactly what it costs to manufacture and sell it.

A manufacturer who does not know with a close degree of accuracy what it costs him to produce the different articles he manufactures, and what it costs him to sell them, is not in a position intelligently to meet competition, and invites business disaster.

Many of the larger manufacturers have thorough cost accounting systems, which they recognize as necessary in order to give them the information essential to successful management. On the other hand, the number of smaller manufacturers who have no adequate cost accounting system and who price their goods arbitrarily is amazing.

Proper accounting for the smaller manufacturer is most essential. It is necessary for his success that he know on what particular article he is making a fair profit and on what he is making only a narrow margin of profit or losing money. If he has this information he can concentrate on the manufacture and sale of the product on which the profits are satisfactory.

Whole industries, in many instances, are suffering from a general lack of intelligent knowledge of cost.

How can the Federal Trade Commission help to cure these conditions?

The Commission has no power and no desire to use compulsory methods, but it does hope to reach the desired end by endorsing standard systems of bookkeeping and cost accounting and to assist in devising standard systems, either at the request of individual merchants and manufacturers or through the association that represents the industry. The Commission expects to have for this work an adequate force of experienced accountants and cost experts and the services, in an advisory capacity, of public accountants of national reputation.

What may be expected from such activities of the Federal Trade Commission?

First—The individual enterprises will be helped. They will be enabled to know exactly where they stand. Their prices will be made on a solid basis of fact.

Second—The employees of these firms will be benefited. They will be trained to more thorough and more accurate methods of work. This improved knowledge will increase their effectiveness and their individual value to their employers.

Third—The investor will be benefited. He will be able to invest his money with greater assurance that it will be used in the most advantageous manner.

Fourth—The public will benefit; it will not have to pay for inefficient methods.

To take a specific example, suppose that there are five plants making a certain line. Imagine that one of these plants is run efficiently and that the other four are managed in a slipshod manner.

Where is the sort of trouble going to appear that costs the public and the trade heavily? In the four plants run in slovenly manner, of course. It is in those four plants that the expensive strikes will occur, the dangerous dissatisfaction among workers will appear, and the demoralizing practice of selling below cost of manufacture will take root and other unfair methods of competition as a means of making sales.

If we can raise the level of effectiveness prevailing in these four plants to the level prevailing at the able managed plant, or even higher, benefits will accrue to every interest concerned. All five of the plants will be on a more satisfactory competitive basis. The employees in at least four of the plants will learn to do their work to better purpose. Consumers will be forced to pay for fewer inefficient methods. The jobbers and retailers will get their goods under more advantageous conditions. And the bankers will have five excellent accounts on their books instead of one excellent and four doubtful ones.

An up-to-date system of accounting will enable the banker to extend to the smaller manufacturer the credit to which he is entitled and which he needs in order to expand his business. The small manufacturer may have just as much brains, ability, knowledge of his wares and of his customers as the larger operator; he may even put out a superior product. But he cannot show the banker a balance sheet based on proper accounting

*An address by Edward N. Hurley, Vice-Chairman of the Federal Trade Commission, before the annual meeting of the Association of National Advertisers in New York City, December 1, 1915.

methods, and the banker does not feel ready to extend credit without the knowledge that such a balance sheet would supply; thus, because business men of this type cannot give statements about their business affairs in the exact manner necessarily required by the bankers, their credit is restricted and their expansion checked.

There should be a greater degree of organization and of mutual helpfulness in all lines of trade and industry, so that American business may be welded into a commercial and industrial whole; the part of the government being to co-operate with business men, on request, to bring about the results that will benefit business and hence promote our national welfare.

One of the most effective forms of organization is the trade association. The association has a wide field of useful and proper activities. Concerns in the same industry may take common action looking toward improving their processes of manufacture, standardizing their product, improving their system of ascertaining costs, obtaining credit information and encouraging the development of trade journals. The welfare of employees is one of the important matters which can be best developed by co-operating in associations. The present tendency of the larger firms to think of the smaller man in the proper spirit and to assist him in arriving at some practical method of ascertaining his costs and meeting his many other problems—in short, to live and let live—is to be particularly commended.

So today the associations of manufacturers, associations of jobbers, associations of merchants, associations of advertisers, are doing good work, and if conducted in a spirit of mutual helpfulness, with the machinery of the Government standing by subject to call, will help solve problems and remove many of the present handicaps of business.

Another respect in which business may help itself is in the field of foreign trade.

Heretofore the American business man, whether manufacturer or otherwise, has been prone to show an interest in foreign trade only during dull periods. Now that business has improved and factories are running full time in this country, I am afraid there is a growing feeling of indifference toward opportunities ahead. The theory has been advanced that it will require years for the countries now at war to resume their normal rate of production, and that the business is bound to come to us anyhow. This is a serious mistake. It was only a few months after the Franco-Prussian war when France was producing almost as much as before. She did not recover her normal purchasing power for 12 years, but this was due to the heavy indemnity Germany laid upon her.

The American manufacturer should realize that not a smokestack has been destroyed during this war in England, Germany or Italy, and only a few in a small part of France.

Unless we take advantage of the great opportunity we now have we will find that ninety days after the war is over Germany, France and England and other European nations will be on their way to a position in the markets of the world even stronger than they occupied before.

True business preparedness demands that every American manufacturer who makes a product that can be sold abroad should aim to sell from 10 to 20 per cent. of his output to foreign consumers. A market which includes both foreign and domestic business stabilizes industry and insures the manufacturer, his employees and the country against the worst effects of financial and commercial depressions.

Business men are not lawyers, and naturally, their thoughts running in other channels, they evolve some strange ideas as to the construction of certain laws. I was recently astonished to learn that the belief exists among many of them that non-competing firms cannot co-operate and form selling agencies to develop foreign business. This idea is unfortunate, and I fear that it has resulted in actually restraining the development of our commerce abroad. And I might mention, by the way, that such commerce can now be more easily developed, since for the first time in our history we have begun to establish our own banks abroad, thus removing many of the difficulties surrounding foreign exchange and credit information. With American branch banks established in South America and projected in the far East, there is no reason why our business expansion should halt.

Perhaps you may think that I am over earnest in this advocacy of organization, higher efficiency in business methods and modern practices, the adoption of European

ideals of thoroughness, the standardizing of accounting, but my earnestness proceeds from an understanding of the conditions which confront American business. The great war has brought to us great opportunities and equally great dangers. The thought that we must keep in mind is, After the war, what? Shall we grow and expand while the growing is good, or calmly wait the time when peace in Europe will be followed immediately by fierce competition not only in foreign markets, but in our domestic market as well?

Broad Discussions of National Business Problems

PROVIDED FOR INTERNATIONAL TRADE CONFERENCE AT NEW YORK NEXT WEEK.

Under the auspices of the National Association of Manufacturers in co-operation with banking and transportation interests of the United States, an international trade conference will be held at the Hotel Astor, New York city, December 6, 7, 8, 1915.

As will be seen by the program, it has been so arranged as to include papers, addresses and discussions of special interest to manufacturers, bankers, transportation officials, credit managers, export managers and traffic managers.

A number of exhibits have also been arranged of interest to those desiring to have concrete examples or object-lessons in ways, means and methods. These exhibits include:

A. Examples of Approved Methods of Packing Goods for Foreign Shipment.

The packages themselves will be shown as put up by firms of long experience in export trade.

The exhibits will include a wide variety of goods packed with various objects in view, such as strength, lightness, prevention of pilferage, attacks of water, vermin, climate, etc.

B. History of an Export Order.

In this exhibit will be shown the model forms and documents used in executing, shipping and financing foreign orders.

A booklet elucidating the chief points of this exhibit will be distributed.

C. United States Bureau of Foreign and Domestic Commerce.

Publications on foreign trade.

D. Ports: Photographic and diagrammatic illustrations of the facilities and advantages of the principal American ports for handling foreign trade will be shown, together with pictorial views of leading foreign ports.

As there will be a number of experienced business men from foreign countries in attendance, arrangements have been made for them to meet manufacturers and others individually at special tables in annex-rooms which have been set apart for that purpose.

The program of the conference (subject to change) is as follows:

FIRST SESSION, MONDAY, DECEMBER 6, BEGINNING 9.45 A. M.

9.45 A. M. Conference called to order by Col. George Pope, President of the National Association of Manufacturers.

10.00 A. M. Address of welcome by His Honor, the Mayor of New York.

10.15 A. M. Response and address by Col. George Pope, as Chairman of the Session.

10.30 A. M. "General Review of Commercial Conditions." Dr. Albert A. Snowden of the National Association of Manufacturers.

10.50 A. M. Address by Mr. Maurice Heilmann, as representative of the French Ministry of Foreign Affairs.

11.00 A. M. Address by Baron de Neufville (of the banking-house of De Neufville & Co., of Paris), as delegate of the Paris Chamber of Commerce.

11.15 A. M. Address by Mr. Alexander Wladimirovitch Behr, Vice-President and Delegate of the Russian American Chamber of Commerce of Moscow.

11.30 A. M. "Australia." Hon. P. E. Quinn, Trade Commissioner of New South Wales.

11.50 A. M. "Colombia." Mr. Francisco Escobar, Delegate of the Chamber of Commerce of Bogota.

SECOND SESSION, MONDAY, DECEMBER 6, BEGINNING 2 P. M.

2.00 P. M. "Norway." Mr. Trygve Wettre, Delegate of the Chamber of Commerce of Christiania.

Have we an inventory of our business resources? Are they being developed to the best advantage? Are our associations doing all they can? Are our methods and processes standardized? In short, are our industries mobilized?

Industrial preparedness must be the watchword. Let us have better organization and greater efficiency at home; let us push our trade abroad; let us develop our industry so strongly that no foreign competition can dislodge it.

2.15 P. M. "Transportation and Foreign Trade." Prof. Emory R. Johnson, Wharton School of Finance and Commerce, University of Pennsylvania.

(Discussion under five-minute rule.)

3.00 P. M. "Preparedness." Mr. George D. Dixon, Vice-President of the Pennsylvania Railroad Co., Philadelphia.

(Discussion under five-minute rule.)

3.45 P. M. "Measures for the Promotion of an American Merchant Marine." Mr. Bernard N. Baker, Baltimore, Md.

"An American Merchant Marine: What the Business Men Desire and What the Country Needs." Mr. Wm. H. Douglas, New York city.

(Discussion under five-minute rule.)

THIRD SESSION, MONDAY, DECEMBER 6, BEGINNING 8.15 P. M.

Chairman—Mr. J. H. Tregoe, Secretary of the National Association of Credit Men, New York.

8.15 P. M. "Foreign Credit Reports and How Obtained." (An Informal "Round-table" Discussion.) a. Character of Information Needed in Credit Reports.

b. Sources for Securing Foreign Credit Reports.

c. The Desirability of Exchange of Experience with Foreign Accounts.

After the opening remarks discussion of these subjects will be limited to the five-minute rule unless the audience authorizes an extension of the speaker's time.

There will be in attendance, prepared to offer information and make suggestions, the staff of the Credit Reports Bureau of the National Association of Manufacturers, representatives of the leading commercial agencies, representatives of banks doing a foreign business, as well as export managers and credit men who have given this subject careful study.

FOURTH SESSION, TUESDAY, DECEMBER 7, BEGINNING 10 A. M.

Chairman for Tuesday—Mr. Theodore C. Search of Philadelphia, President National Association of Manufacturers from 1896 to 1902.

10.00 A. M. "India." Mr. N. M. Marshall, representative of the Government of British India.

10.15 A. M. "International Trade and Finance as a Sign of National Prosperity." Mr. John Clausen, Manager Foreign Department, Crocker National Bank, San Francisco, Cal.

(Discussion under five-minute rule.)

10.45 A. M. "The Making of an Export Policy." Dr. E. E. Pratt, Chief, Bureau of Foreign and Domestic Commerce, Washington, D. C.

(Discussion under five-minute rule.)

11.15 A. M. "Credit and the Future of American Foreign Trade." Mr. V. Gonzales, Banking Advisor of the National Association of Manufacturers.

(Discussion under five-minute rule.)

12.00 noon. "The International Situation and Future Trade Relations." Hon. John Bassett Moore.

(Discussion under five-minute rule.)

FIFTH SESSION, TUESDAY, DECEMBER 7, BEGINNING 2 P. M.

2.00 P. M. "The Levant." Mr. J. Wylie Brown, Executive Secretary, American Chamber of Commerce for the Levant, and Mr. Robert C. Rindelauf of Constantinople and New York.

2.30 P. M. "Foreign Branches of American National Banks." Mr. W. S. Kies, Vice-President, National City Bank, New York.

"An American Bank for Foreign Trade." Mr. John J. Arnold, Vice-President, First National Bank, Chicago, Ill.

"An Independent Bank for Foreign Trade." By the Committee on Banking and Currency of the National Association of Manufacturers (Mr. Ludwig Nissen, Chairman; Mr. James Maynard and Mr. V. Gonzales.)

(Discussion of the above three papers under the five-minute rule.)

4.00 P. M. "The Influence of American Investments

*A more detailed review of the business conditions in the various countries of the world will be placed before the Conference in printed form as supplementary to Dr. Snowden's address.

in Foreign Countries." Mr. Mortimer L. Shiff, of Kuhn, Loeb & Co.
 "Foreign Securities and Their Influence on American Foreign Trade." Mr. J. Santilhan, of the Guaranty Trust Co., New York.

**TUESDAY EVENING, DECEMBER 7.
 Banquet.**

Hotel Astor, at 7 P. M.
 Toastmaster—Mr. James A. Emery, Washington, D. C.
 Speakers—His Excellency Domício da Gama, Ambassador from Brazil.
 His Excellency Federico Alfonso Pezet, Minister from Peru.
 Mr. W. S. Kies, Vice-President, National City Bank, New York.
 Prof. Jeremiah W. Jenks of New York University.

SIXTH SESSION, WEDNESDAY, DECEMBER 8, BEGINNING 10 A. M.

Chairman for Wednesday—Mr. William McCarroll of New York.
 10.00 A. M. "Australia." Mr. Percy Roderick McLean, Director of Frazer & Best, Ltd., Sydney.
 10.15 A. M. "Persia." Mr. H. H. Topakyan, Imperial Persian Consul-General.
 10.30 A. M. "The Extension of Foreign Banking Relations." Mr. Benjamin Joy, Vice-President, National Shawmut Bank, Boston, Mass.
 (Discussion under five-minute rule.)
 11.00 A. M. Mr. David H. G. Penny, Vice-President, Irving National Bank, New York.
 (Discussion under five-minute rule.)
 11.30 A. M. "The Development of the American Discount Market and Its Relation to Foreign Trade." Mr. John E. Rovensky, of the National Bank of Commerce, New York.
 (Discussion under five-minute rule.)

SEVENTH SESSION, WEDNESDAY, DECEMBER 8, BEGINNING 2 P. M.

2.00 P. M. "Advertising in Foreign Trade." Mr. Hugh M. Kahler, New York city, editor "How to Export."
 (Discussion under five-minute rule.)
 2.30 P. M. "Co-operation in Foreign Trade Development." Mr. H. C. Lewis, General Manager, National Paper & Type Co., New York city.
 (Discussion under five-minute rule.)

The officials of this Trade Conference are the following:

Representing the National Association of Manufacturers:

George Pope (Chairman), Hartford, Conn.
 President National Association of Manufacturers of the United States.
 W. C. Allen, New York.
 President Yale & Towne Manufacturing Co.
 George H. Barbour, Detroit, Mich.
 Vice-President, Michieann Store Co.
 F. R. Briggs, Boston, Mass.,
 Treasurer, Thomas G. Plant Company,
 John A. Campbell, Trenton, N. J.,
 President, The Trenton Potteries Co.
 L. A. Carlton, Chicago, Ill.,
 Treasurer, Swift & Co., Union Stockyards.
 W. H. Cottingham, Cleveland, O.,
 President, Sherwin-Williams Company.
 Richard H. Edmonds, Baltimore, Md.,
 Editor, MANUFACTURERS RECORD.
 C. C. Hanch, South Bend, Ind.,
 Treasurer, Studebaker Corporation.
 Alvin Hunsicker, New York.
 Secretary, Standard Oil Cloth Co.
 C. R. Johnson, San Francisco, Cal.,
 President, Union Lumber Co.
 Frederick J. Koster, San Francisco, Cal.,
 President, California Barrel Co.
 George E. Long, Jersey City, N. J.,
 Vice-President, Joseph Dixon Crucible Co.
 M. A. Oudin, Schenectady, N. Y.,
 Manager Foreign Department, General Electric Co.
 J. Scott Parrish, Richmond, Va.,
 Treasurer, Richmond Cedar Works.
 H. K. Porter, Pittsburgh, Pa.,
 President, H. K. Porter Company.
 J. W. Rawle, Philadelphia, Pa.,
 Vice-President, J. G. Brill Company.
 Edwin C. Shaw, Akron, O.,
 Vice-President, B. F. Goodrich Company.
 Ernest G. Swift, Detroit, Mich.,
 General Manager, Parke, Davis & Co.

Secretary:

William M. Benney, 30 Church Street, New York.
 Manager, Foreign Trade Department, National Association of Manufacturers.

Representing Banking Interests:

John Clausen, San Francisco, Cal.,
 Manager Foreign Dept., Crocker National Bank.
 F. Abbot Goodhue, Boston, Mass.,
 Vice-President, First National Bank.

W. S. Kies, New York.
 Vice-President, National City Bank.
 David H. G. Penny, New York.
 Vice-President, Irving National Bank.
 Charles H. Sabin, New York.
 President, Guaranty Trust Company of New York.

Representing Transportation Interests:

Geo. D. Dixon, Philadelphia, Pa.,
 Vice-President, Pennsylvania Railroad Co.

P. J. Flynn, New York,
 Vice-President, Del. Lack. & Western R. R. Co.
 Fairfax Harrison, Washington, D. C.,
 President, Southern Railway Co.
 Julius Kruttschnitt, New York,
 Chairman, Executive Committee, Southern Pacific Company.
 W. E. Mullins, New York,
 General Manager, Freight Dept., United Fruit Co.
 A. H. Smith, New York,
 President, New York Central Lines.

Great Pottery Industry Possible in Macon District

COMPLETE SCIENTIFIC INVESTIGATIONS SHOW EVERY FACTOR FAVORABLE ACCORDING TO REPORT JUST MADE.

That Macon, Ga., should become the future center of the pottery industry of the South is the conclusion reached by T. Poole Maynard, Ph.D., mining and consulting geologist of Atlanta, Ga., after a searching investigation continuing over several months. The investigation was undertaken in pursuance of a co-operative plan agreed upon by the Central of Georgia Railway and the Macon Chamber of Commerce. As Georgia is the leading State in the production of Kaolin and the greater portion of the Georgia kaolins are mined in the Macon district, the investigation was undertaken to definitely determine whether the Macon district also might contain feldspar deposits and suitable silica, and whether the location of these materials, with relation to transportation, water supply, overburden, area underlain, tonnage and other factors relative to their commercial development, would make feasible an extensive commercial development of the pottery industry in Macon.

Dr. Maynard has recently made an exhaustive report of the investigations. He covered every feature relating to the industry, including comparative cost of manufacture at Macon and at pottery centers elsewhere in the United States, railroad transportation of raw materials and manufactured product, cost of fuel, power, labor, etc., and in his summary declares that Macon has proved to be the logical center for the location of pottery plants in the South. Within 180 miles of Macon kaolins are found entirely suitable for the manufacture of the highest grades of tableware, while the secondary kaolins in the Macon district are suitable for wall tile, semi-vitreous tableware, floor tile, electrical porcelain and secondary pottery materials. The estimate is made that there is a sufficient quantity of high-grade kaolins in this district for all pottery uses for many hundreds of years. The uses to which the materials are best adapted were determined by Prof. Arthur S. Watts of the Ohio State University and the United States Bureau of Mines from physical tests made upon samples collected by Dr. Maynard.

Pottery manufacture, it is pointed out, is one of this country's greatest industries. The manufacture of white pottery wares increased 62.5 per cent. between the years 1901 and 1912, while secondary ware and porcelain electrical supplies showed the great increase in development during this period of 331.7 per cent. The value of the pottery industry in 1913 amounted to \$37,992,375. The consumption of pottery products in 11 Southern States has a value of about \$13,000,000. These facts are given by Dr. Maynard to demonstrate that it is to the decided advantage of a community to build up a pottery industry.

In the course of his report Dr. Maynard says:

"The kaolins of the Macon district are found in the Coastal Plain in the immediate vicinity and within 50 miles of Macon. These kaolins were found in great quantity contiguous to the Central of Georgia Railway, extending from the vicinity of McIntyre on the Macon-Savannah division to the vicinity of Macon on the west, and on the Macon-Fort Valley division, between Macon and Fort Valley, and in the vicinity of Perry and Butler, Georgia.

"A map showing the geological formations, containing clay deposits, shown by the geological survey of Georgia, is misleading in its relation to the commercial clay deposits between Macon and McIntyre, in that it shows the areas underlain by geological formations, which may

consist of unconsolidated sandstone, but which may be underlain by commercial clays within a few feet of the surface.

"Large areas of clays of commercial value have been located in this area, which were previously not considered to contain commercial clay deposits.

"Geologically, the commercial clay deposits in the Macon district are found in the formations of the Cretaceous and Tertiary Age. The greater portion of the clays of the Macon district are of Cretaceous Age, while the Tertiary clays are known only in a few localities to be of commercial value, but are in general of exceptional purity.

"The clays of the different geologic formations vary in their physical and chemical character in the same formation, so that the commercial factors which relate to individual properties can only be told by prospecting. The kaolin beds are massive, and lie practically horizontal, and there is no appearance of faulting. Fractures in the clay beds are shown by jointing, which facilitates to some extent the mining of these kaolins.

"The kaolin beds of the lower Tuscaloosa formation are usually of great uniformity and thickness and continuity. Their thickness varies from 10 feet to 30 feet or more. The kaolin beds of the upper Tuscaloosa formation are extremely irregular in their thickness. The beds of the upper Tuscaloosa formation were at one time subjected to a sub-areal erosion, which took place before the overlying beds of sands or other kaolins were deposited upon them, resulting in the washing away of some of the kaolin beds and in places reducing the original thickness of the deposit. This character of deposit necessitates detailed prospecting in order to determine the average thickness and the tonnage.

"Kaolins were found in the vicinity of Goodwater, Ala., which were tested by Professor Watts and described as excellent for use in the manufacture of the highest grades of white ware. These kaolins are in dykes, representing deposits of feldspar which have been altered to kaolins through weathering for a long period of time. They are similar in their origin to the kaolins of the Appalachian Mountain Belt of North Carolina. These deposits lie within 180 miles of Macon, and would be a source of clays for use in plants in the Macon district manufacturing the highest grades of white ware.

"The ball clays used in the manufacture of pottery products have not been found in Georgia. However, it is entirely possible that ball clays will some time be found. The ball clays of Tennessee and Florida are at present extensively used in pottery manufacture.

"The Macon district is more favorably located with relation to the Florida ball clays and just as accessible as the Ohio and West Virginia fields to the foreign ball clays, and as favorably located as the New Jersey and Ohio plants are with relation to the Tennessee ball clays.

"Practically all of the clays which are now imported in the United States come from the vicinity of Cornwall, England. About 300,000 tons are annually imported, 25 per cent. of which are used in the manufacture of white ware and the remaining portion is used in the paper and bleaching industries. The value of the imported clay averages about \$6 per ton at the mines. The rate by water to New York, Savannah and New Orleans varies with each cargo, but the average rate may be taken at \$3 per ton.

"If the potters still insist upon using the foreign kaolins in the manufacture of white ware, these foreign

clays can be delivered in Macon cheaper than they are now delivered in the North and East, as is shown by the freight rates quoted below. Assuming that the freight rates from England to New York and Savannah are the same, approximately \$3 per ton, then the additional rates to Trenton, East Liverpool and Macon are as follows: New York to Trenton, \$1.40 per net ton; New York to East Liverpool, \$2.94 per net ton; Savannah to Macon, 95 cents per net ton. There is thus a saving of 45 cents per net ton to Macon in comparison with the New Jersey plants and \$1.99 per net ton in favor of Macon in comparison with the East Liverpool plants.

Feldspars are used as a mix with kaolins, flint or silica, and ball clays in the manufacture of white-ware pottery.

Feldspar and silica deposits occurring in the immediate Macon district have been proved to be entirely suitable for use in all pottery products, so that at least 50 per cent. of the raw materials used in pottery manufacture are found in the immediate Macon district.

The cost of materials delivered at the average pottery plant, as shown by the recent report of the 'Department of Commerce and Labor, on the Pottery Industry,' miscellaneous series No. 21, are as follows: Clay, \$11.18 per ton; flint, \$5.69 per ton; feldspar, \$11.38 per ton; coal, \$2.33 per ton.

These materials are all shipped to the pottery plants in the North and East from widely-separated points. The kaolins are secured from England and from North Carolina, South Carolina, Georgia, Tennessee and Florida. The feldspar materials are secured from New York, North Carolina, Maryland and other distant points, and the silica materials are also derived from distant points.

The cost of the raw materials in the Macon district will not be more than one-half the cost of assembling the raw materials at the pottery plants in the North and East, and these estimates are made on a very conservative basis and allow a good profit for the companies mining these materials.

The cost as estimated for delivery of these materials in the Macon district are as follows: Clay, \$7 per ton; flint, \$2 per ton; feldspar, \$3 per ton; coal, \$3.25 per ton.

If the pottery plants owned and mined their own kaolin, silica and feldspar deposits, they could deliver the kaolin to Macon at a cost of not more than \$3 per ton; flint, \$1 per ton, and feldspar, \$2 per ton.

High-grade coals can be secured either from Alabama or Tennessee and from the Durham coal fields in North Georgia. The cost of slack coal f. o. b. mines in Alabama and Tennessee will average about \$1.25 per ton. The fuel supply can be obtained from Alabama and Tennessee points at only a slight increase in cost from that which applies to the Trenton and East Liverpool districts, and as the cost of fuel in pottery plants amounts only to about 6 per cent. of the total cost of manufacture, this slightly increased cost will be overcome by the advantages of the low rates and the large amount of hydro-electric power available in the Macon district.

It is definitely shown that the proximity of the raw materials one to the other, to fuel supply, to railway transportation and to conditions which affect the commercial development of the raw materials prove that these materials can be assembled at Macon for less than half the cost of the assemblage of the raw materials at the average pottery plants in the United States.

Macon has six railways, and affords every advantage for the transportation of finished products to the Southern States. The condition of freight rates alone would guarantee the markets for a large production of pottery materials, as is brought out under the discussion of freight rates with reference to Macon and the Northern pottery centers. The total value of pottery consumed in the Southern States is estimated at \$10,442,389.50, all of which is imported from the Northern pottery plants.

Cheap labor and cheap cooerage would materially lower the cost of production, and other factors of cost will not exceed the average in the Northern potteries."

Newport News Shipyard Deal Denied.

Referring to recent rumors that the Midvale Steel & Ordnance Co. had completed negotiations for the purchase of the Newport News Shipbuilding & Drydock Co., Wm. B. Dickson of New York, secretary of the Midvale company, wires the MANUFACTURERS RECORD: "There is no basis for this statement."

Enormous Oil Production Increase in Fields of North Louisiana

[Special Correspondence Manufacturers Record.]

Shreveport, La., November 26.

Less publicity has been given to the oil fields of North Louisiana than to any oil district in the United States. There has been no oil boom in North Louisiana, probably due to the fact that the development of the field has been done largely by local capital. Ninety per cent. of the independent companies have been financed in Shreveport and the adjacent towns, and the money has come from the savings of Louisiana, Texas and Arkansas people.

Yet in some respects the oil fields of North Louisiana are the most remarkable in America. From nothing they have come in a remarkably short time to occupy fifth place in petroleum production, and are likely soon to assume third place. Quite recently deals have been consummated whereby the Standard Oil Co. has spent several millions of dollars in acquiring leases and producing wells in this territory, and it is reported that other similar large operations are in process of negotiation.

Oil was not discovered in North Louisiana until 1904, and no attempt was made to develop the territory until two years later, when the total production for 1906 was only 3358 barrels. The production for 1914 was more than 12,000,000 barrels, so greatly has the field and its development extended. Following is a table of the field's production from 1906 to 1914, which shows how steadily it has grown without the aid of fictitious publicity or abnormal boosting:

1906.....	3,358
1907.....	50,000
1908.....	499,937
1909.....	1,028,818
1910.....	5,000,798
1911.....	6,995,828
1912.....	7,177,949
1913.....	9,781,560
1914.....	12,210,000

This does not take into consideration the production of Red River parish, which in less than a year has become the most productive field in the whole district. For instance, Red River parish produced during the week ending November 20, 29,410 barrels.

North Louisiana developers have labored under the handicap of low prices for their product, this field usually being the last to feel the stimulus of advancing prices of oil made by the Standard and other consuming companies. For several months the price of crude hovered around the 35-cent mark, and never has been awarded as much for oil as the California, Oklahoma or Texas fields. In spite of this, the development of the field by the independents has gone forward actively and courageously, and the infant industry is growing until soon it will be a giant among producing fields.

In no other field of its size in the world has so much high-grade oil been produced in so short a time as in North Louisiana. The oil is found in three different strata. The shallow sand, producing a heavy oil, 22 degrees Baume at 900 feet; the second sand, found at 1200 to 1600 feet, disclosing an irregular formation which cannot be depended upon, is a freak, the oil being found in pockets. This is called the chalk rock stratum, producing much gas, and the gravity of the oil is from 27 to 36 degrees Baume. The high-grade oil in the Caddo field is found at 2200 to 2400 feet, and in the De Soto and Red River fields at from 2400 to 2550 feet, and is of a gravity of 38 degrees and above. This sand produces gas from which gasoline can be made, the top sand being of no value for this purpose. The deeper oils in this field all have a paraffine base, which accounts for their high gravity.

Experts are of the opinion that there is still an underlying sand in this field which has never been tapped, and that instead of the field being soon depleted the possibilities for larger production are limitless.

At no time during the past year of depression has there been any diminution of production or delay in following up development. The pipe-line companies have taken the production of the wells, and while the price has been small, new properties have been opened without hesitation for this reason. Nearly 1,000,000

barrels of oil have been piped out of this field every month to the various refineries.

The gas production of the district is enormous. Shreveport is plentifully supplied from wells in its immediate vicinity, and Texarkana, Hope, Little Rock and Hot Springs in Arkansas, and Memphis, Tenn., are furnished gas from this Caddo field. Shreveport's prosperity and wonderful growth in the past few years has been in a large measure due to her proximity to the oil and gas fields, and an inexhaustible supply of fuel gas which she is enabled to offer to manufacturers as an inducement to locate here. A producing gas well may be drilled almost anywhere in the vicinity of the city at a cost of about \$3000, which will supply from 5,000,000 to 20,000,000 cubic feet of gas a day for fuel purposes.

One of the most sensational developments of a new field was that experienced in Red River parish, in what is known as "Gusher Bend." This is a strip of land about 500 acres in area in a bend in the Red River, which was located about six months ago. Soon it was leased and released to independent companies who operated on from 5 to 40 acres of land each. The bonus on some of this was as high as \$500 an acre, and so frequently did the leases change hands that the royalties mounted higher and higher. There ensued a terrific race for production, and soon the bend fairly bristled with derricks. Gusher after gusher was brought in until the aggregate initial production amounted to 50,000 barrels. Almost every day a new gusher came in, and excitement ran high. One oil company, operating on 40 acres, rushed down six wells and all came in, with an initial production of 10,000 barrels daily. But owing to a forgotten and unsatisfied mortgage litigation ensued, tying up the oil in the hands of the Standard and other consuming companies, and it is not yet settled.

The wonderful record of "Gusher Bend," with more than 100 wells and not a dry hole, stimulated drilling all over the territory, with the result of extending it in all directions, but particularly toward the south. About a mile south and east of "Gusher Bend" there recently was brought in by the Lenzburg-Crichton Company a well with an estimated initial flow of 20,000 barrels. This was pinched down at once on account of a lack of tankage, which somewhat affected the production of the well, but it is now producing about 3600 barrels. This established the southerly trend of oil and in less than a week 25 derricks went up in the land nearby, and towns of mushroom growth sprang up over night.

Preparations are being made for an unprecedented amount of business during the coming year. The Standard Oil Co. has doubled its pipe line capacity between Ida, its collecting station for this field, and its mammoth refinery at Baton Rouge, by laying a second eight-inch line between these points. This will enable the company to take more oil from the Oklahoma field, as well as from Caddo and Red River. The capacity of the Baton Rouge refinery is being more than doubled to meet these requirements. Other lines are being looped, and about 170 miles of eight-inch line has been relaid in cement. This testifies to the Standard's confidence in the permanency of the field.

The Gulf Refining Co. and the Texas Company both have a maze of pipe lines gathering oil from the various fields for their refineries at Beaumont and Port Arthur, and two local refineries at Shreveport have laid pipe lines.

New projects for refineries have sprung up in the past few months. New York and Pittsburgh capital have bought a large interest in the Louisiana Oil Refinery at Shreveport, which is doing a splendid business, and it is the intention to double its capacity.

The Developers Oil & Refining Co. proposes to build a refinery at Shreveport, using its own production and that of allied companies. It is the present intention of the company to break ground for its refinery about the first of the coming year.

It is reported that the Benedum-Trees interests of Pittsburgh, which sold its original holdings in this field to the Standard Oil Co. about a year ago for a consideration of several millions of dollars, and carried

through another deal with the Standard about the middle of November for another large tract of land for something in the neighborhood of \$1,000,000, are contemplating the erection of a large refinery at Shreveport. With Parker & Edwards the Benedum-Trees-Daily people recently have acquired an enormous amount of productive territory, and they can produce from their own wells a sufficient amount of oil to keep an enormous refinery busy.

For an infant oil district that of North Louisiana is exhibiting a growth so precocious as to elicit the deepest interest of the "big money," but the field is so large, with possibilities of extension so great, that there always will be wonderful opportunities for fortune to the independent with courage and brains.

GRANT RICHARDSON.

Southern Industrial Activities.

During November the Construction Department of the MANUFACTURERS RECORD published 4110 items regarding industrial developments, railroad and financial interests and building operations in the South and Southwest. The items published during the preceding 10 months numbered 46,544. Thus a total of more than 50,000 (exactly 50,654) statements relative to conception, progress and completion of these various developments, including specific foreign and domestic requests for machinery and supplies, has been presented to readers of the Daily Bulletin and the MANUFACTURERS RECORD.

The table for November follows:

Industrial and Developmental.	
Bridges, Culverts, Viaducts.....	67
Canning and Packing.....	10
Clayworking Plants.....	9
Coal Mines and Coke Ovens.....	47
Concrete and Cement Plants.....	6
Cotton Compresses and Gins.....	11
Cottonseed-Oil Mills.....	11
Drainage Systems.....	29
Electric Plants.....	91
Fertilizer Factories.....	4
Flour, Feed and Meal Mills.....	30
Foundry and Machine Plants.....	27
Gas and Oil Enterprises.....	85
Ice and Cold-storage Plants.....	62
Iron and Steel Plants.....	17
Irrigation Systems.....	1
Land Developments.....	39
Lumber Manufacturing.....	53
Metal-working Plants.....	13
Mining.....	74
Miscellaneous Construction.....	39
Miscellaneous Enterprises.....	182
Miscellaneous Factories.....	74
Motors and Garages.....	5
Railway Shops, Terminals, Roundhouses, etc.....	268
Road and Street Work.....	73
Sewer Construction.....	32
Telephone Systems.....	20
Textile Mills.....	5
Water-power Developments.....	88
Water-works.....	33
Woodworking Plants.....	33
Buildings.	
Apartment-houses.....	48
Association and Fraternal.....	40
Bank and Office.....	68
Churches.....	75
City and County.....	41
Courthouses.....	26
Dwellings.....	401
Government and State.....	39
Hospitals, Sanitariums, etc.....	25
Hotels.....	42
Miscellaneous.....	50
Railway Stations, Sheds, etc.....	29
Schools.....	141
Stores.....	165
Theaters.....	23
Warehouses.....	43
Railroad Construction.	
Railways.....	50
Street Railways.....	4
Financial.	
Corporations.....	81
New Securities.....	336
Fire Damage.....	3,302
Machinery, Proposals and Supplies Wanted.....	305
Previously detailed since January 1.....	50,544
Total for November.....	4,110
Total for eleven months.....	50,654

Enlarging Southern Fertilizer Factories.

The Home Guano Co., Dothan, Ala., will expend about \$50,000 for erecting an 80x40-foot burner-house and a 220x40-foot chamber building, partially fireproof and partially mill construction, for adding to its fertilizer factory. The building materials have been ordered and the construction contract has been awarded to Hugger Bros. of Montgomery.

About \$40,000 will be the cost of a 200x180-foot mill-construction building which the American Agricultural Chemical Co. of Boston and New York will add to its fertilizer factory at Greensboro, N. C. The building materials have been purchased and the construction contract has been awarded to Hugger Bros. of Montgomery. The plans are by the company's engineering department.

Americanizing Industrial Workers a Patriotic and Economical Necessity

SUDDEN REALIZATION OF THE NATION'S PERIL IN THE PRESENCE OF
UNAMERICANIZED WAGE-EARNERS—WHAT INDUSTRIES MUST
DO TO HELP REMOVE THE MENACE.

Thinking men and women of America are rapidly becoming aroused to the tremendous importance of Americanizing foreign residents of the United States. A National Americanization Committee, whose officers and backers are among the most distinguished men and women in the country, is energetically seeking to arouse the entire public to the necessity of Americanizing these foreigners and inspiring them with a sense of patriotism and devotion to the land of their adoption. A statement on the work the industrial institutions of this country can do in this line is given herewith.

The officers and executive committee of the organization, whose headquarters are at 18 West 34th street, New York City, are as follows:

Frank Trumbull, chairman.
Percy R. Pyne, 2d, first vice-chairman.
Mrs. Edward T. Stotesbury, second vice-chairman.
William Sproule, third vice-chairman.
Mrs. Vincent Astor.
Miss Frances A. Kellor.
Peter Roberts.
Mrs. Cornelius Vanderbilt.
Felix M. Warburg.
William Fellowes Morgan, treasurer.

MEMBERS:

Mary Antin,
Robert Bacon,
Nicholas Murray Butler,
Richard Campbell,
P. P. Claxton,
R. T. Crane, 3d,
Henry P. Davison,
Coleman Du Pont,
Thomas A. Edison,
Howard Elliott,
John H. Fahey,
Maurice Fels,
John H. Finley,
David R. Francis,
Elbert H. Gary,
James Cardinal Gibbons,

Clarence H. Goodwin,
John Grier Hibben,
Myron T. Herrick,
Henry L. Higginson,
Frederic C. Howe,
Charles H. Ingersoll,
Dr. Abraham Jacobi,
Judge Manuel Levine,
Seth Low,
Clarence H. Mackay,
C. H. Markham,
Alfred E. Marling,
Wyndam Meredith,
George von L. Meyer,
John Mitchell,
A. J. Montague,

John H. Moore, U. S. N., Ret.
Joseph C. Pelletier,
Samuel Rea,
Julius Rosenwald,
M. J. Sanders,
Jacob H. Schiff,
Bishop Thomas Shahan,
Melville E. Stone,
Mrs. William C. Story,
William H. Truesdale,
Rodman Wanamaker,
S. Davies Warfield,
Charles B. Warren,
Benjamin Ide Wheeler,
General Leonard Wood.

Chairman Frank Trumbull, who is chairman of the board of the Chesapeake & Ohio Railroad, has recently been made chairman of an Immigration Committee, created by the Chamber of Commerce of the United States. It will be the work of this committee to direct and stimulate among foreigners the aims and efforts of the National Americanizing Committee.

American industry has made the population of this country what it is today—some 100,000,000 people, drawn from many countries, about one-sixth of them born in foreign lands.

During the past year we have suddenly awakened to the fact that many millions of these residents and workmen of ours are not Americans; that they do not use our language, follow our social customs, do not possess or aspire to our citizenship, and naturally enough, therefore, do not cherish for our Government and country a passionate loyalty. The situation has existed for many years. The present intense interest in it is due to the fact not that it is new, but that it has just been recognized. All the implications and possible results of our social and political incoherence have simply been thrown into high relief by the war; they were not created by it.

The sign language in factories; the foreign language and the padrone in labor camps; villages and colonies scattered through our cities; several million non-citizens and non-voters living and working under laws in the making of which they have no voice, of which they have little knowledge, and for which they sometimes have little respect; thousands of others naturalized voters, but with no real American contact or American understanding, marshaled and voted in companies by American bosses—all these conditions now prevalent and typifying our failure to assimilate our immigrant population are not chargeable to industry.

But industry is the force in American life which has the remedy chiefly in its control. And only the organized assistance of industry can make it possible for this country within any reasonable time to unify the present heterogeneous factors in our national life and substitute for a babel of tongues the English language; for a half-dead loyalty to the familiar old country, and a half-alive loyalty to the unknown new one, an under-

standing and unequivocal American citizenship; instead of old country homes in American cities and mill and mining towns, build up American homes, with American standards of living, and replace the vague mixture of memories and aspirations that characterizes these men without a country with a vivid and alert American patriotism.

In the work of Americanization, so long neglected, now so urgent, industry has the strategic position. Many functions of government and society are concerned with Americanization, and are perhaps primarily responsible for it—our public education, our employment system, our courts, our social protective organizations. But most of these have no direct or influential or authoritative approach to the immigrant unless he becomes a public charge.

The employer has. The gist of the whole situation lies in this. And it is to the employer that the nation now turns for immediate aid and co-operation in the gravest task that the country has faced since 1861—the necessity of reinforcing our national unity, of making our many peoples one nation, marked from coast to coast by a common language, a common acceptance of industrial standards, a common understanding of the rights and obligations of American citizenship.

Solely on the grounds of industrial efficiency and "safety first," the work commends itself to the individual employer. A man that speaks English, reads English newspapers, possesses American citizenship and understands it is manifestly more efficient than a non-English-speaking immigrant with only foreign traditions. He understands orders; he is more ambitious to learn; he can guard against dangerous machinery; he can think for himself and is not the prey of every agitator; he understands his community, comes to have a possessive interest in it, is likely to buy a home and invest his savings there, and he becomes for the com-

munity a stable industrial asset; for the employer a permanent investment.

And so an employer may set out to make the English language universal throughout his plant and to promote citizenship among his immigrant workmen purely as a part of an industrial efficiency or safety first policy. Or he may do these things in a semi-philanthropic way, as a part of an enlightened welfare movement. A number of large industries and corporations are now carrying on this work of Americanization, with rewarding results, along these lines, and from these points of view, as a development and enterprise of the individual industry, with reference to no outside factors.

So long as our public educational systems are as contracted as they now are, and so long as facilities for any form of education for adult immigrants do not exist at all in many industrial centers, large or small, this Americanization work on the part of industries is probably being done ten times better within the industry than it could be outside it. And we may well greet with great enthusiasm the entry of any new individual industry into this field.

But this fact remains: The Americanization of our foreign-born workmen, even so far as teaching English merely is concerned, is too vast a project for the individual industry. Industries vary in wealth, equipment, stability of labor, hours, and in a dozen other ways. Teaching the English language and securing citizenship to immigrant workmen is a legitimate part of public policy. It belongs to the public schools and the courts of every community, aided by every civic force. The greatest service the industries of any community can render to themselves, to the social destiny of their community and to the cause of our national solidarity is to back their organized support solidly up behind the public school system in its task of making English-speaking residents and citizens of every family in the community.

In Detroit an organized experiment of this kind was recently worked out. Detroit's Americanization problem is as grave as that of any city in the country. With 74 per cent. of its population either foreign born or of foreign-born parentage, with an increase of 300,000 in population within the past five years, and with public school facilities which, almost inevitably, are adapted to the provincial Detroit of a few years ago rather than to the cosmopolitan city it is today, every natural difficulty in the situation has been intensified. But this year the Detroit Board of Education, with an increased night school appropriation decided to wage a campaign to get the non-English-speaking and non-citizens into the schools. The first step was to invite the assistance of the Board of Commerce. The Board of Commerce, acting as a clearing-house for the employers of the city, carried the night-school campaign into every shop and factory in Detroit, and increased registration in the night schools by 153 per cent.!

How? Sometimes by making night-school attendance compulsory, as in the case of the Northway and the Saxon company; sometimes by encouragement and influence merely; sometimes by a bonus—a wage increase of two cents an hour for the non-English-speaking that would attend night school; by a preferential policy, making it clear by proclamation and practice that the firm would henceforth prefer men that were attending night school and making an effort to learn English and become citizens. For many years we have by various statutes and ordinances restricted the non-citizen's right to work on public works in some States, in this trade or that in other States. It is high time that this negative policy (which, though based on a rational principle, has been arbitrary and ill-informed in the formulation of that principle) be supplanted by a constructive one which shall put a premium on American citizenship rather than attach a disability to the lack of it. Industries are in a better position than Legislatures to drive home this point.

Individual industries, or groups of industries represented by chambers of commerce or such bodies, that wish to secure in their communities factories of English-speaking men and a unified society based on the possession of American citizenship may well follow the lines of the work begun in Detroit and in Syracuse. It has consisted not merely in a campaign of employers to get men into the night schools. It included also follow-up systems to keep them there. Industries co-operated with the Board of Education in checking up the attendance and progress of the men in their indi-

vidual factories, and in showing preference in the matter of promotions in accordance with night-school records.

Without the systematized co-operation of employers, no community of varied industries can evolve a satisfactory system for Americanizing its immigrant population. Many adjustments are necessary, and they can be attained only through such co-operation. How, for instance, can men working in one or two-week shifts go to the regular night school? Not at all, unless, as in Detroit, employers go to the Board of Education and together they work out a plan. How can men that work 12 hours a day go to night school, reaching it by 7 o'clock? They cannot. But the school can come to them. In Detroit the Board of Education offered to send 10 teachers to such a shop employing hundreds of immigrants if the firm would equip the 10 classrooms.

Americanization is a civic matter, the present need of it a national crisis. The nation never issued to industry a more urgent patriotic call than it issues now. It needs the response of industry as national organizations, as local chambers of commerce and boards of trade, as individual plants in every community. Many of our national defenses—our munition plants, our railroads, our big construction works, for instance—are at this moment in the hands of un-Americanized workmen, with all the dangers of inefficiency and disaffection that this implies. We need citizens behind our machines, in our factories, exactly as we need them behind our guns.

The "war boom" towns are curiously massing our labor supply, especially our immigrant workmen. Hopewell, Va., to cite only one, has grown in population from 600 to about 30,000 in less than six months. The problems of housing, education, the maintenance of industrial peace are intensified a thousandfold in these places. With a homogeneous population, the evils would be serious enough. With an un-Americanized population in communities every facility of which, even the means of maintaining peace, is overtaxed and inadequate, it needs no alarmist to discern the gravest menace.

The swiftest hope of Americanization in these towns, as in others, lies in the active co-operation of employers, the public schools, the courts and bodies of patriotic citizens. In this work of preparedness it will often be left to industries to take the initiative. It is their privilege to do so.

JUBILANCE REIGNS IN OLD MISSOURI.

Transportation Lines Are Humming, Everybody Is Optimistic, and Prosperity Is in Evidence Everywhere.

[Special Correspondence Manufacturers Record.]

Webster Groves, Mo., November 26.

It is self-evident that a decrease or increase in the means of transportation indicates the trend of trade. Of this fact I have had ocular demonstration during the past year. Twelve months since I came to Webster Park Station, on the Missouri Pacific Railroad, a few miles out of St. Louis, with the sole view of recuperating from a very serious nervous breakdown. While it is not the purpose of this story to tell the readers of the MANUFACTURERS RECORD that I am improved in health to a point that enables me to entertain a reasonable hope of being able at an early day to again take up my usual vocation, I do want to tell them, in my opinion, nowhere upon all the earth can be found a more salubrious, health-giving section than that embraced in the foothills and ranges of the Ozark Mountains, within the limits of the good old conservative though (now) progressive State of Missouri.

If any of your readers are lacking in health, I challenge them to come to these mountains and test my opinion. If they do not believe that the State is progressive to a degree never before known, let them go into St. Louis, note the "get-up-and-go" of her business men, the confident bearing of her capitalists; sound her real estate owners, take a look at the recent super-magnificent improvements in buildings, parks, streets, etc., complete and in process; figure upon her banking resources, investigate her innumerable industrial plants, her manufactures, her jobbing, wholesale and retail business, her packing and shipping connections

and facilities; then go down to any one of the splendid bridges and interview the Great Father of Waters, estimate upon the possible tonnage of that mighty national waterway, where the nation itself realizes its importance and demands that Congress shall put it in shape to be utilized, winding up with a careful investigation of her many railway connections, her trolley lines, suburban and interurban, not overlooking the unexcelled Union Station, covering the block from 8th to 9th street on Market.

Go to Kansas City, St. Joseph, Sedalia, or any of the minor cities, set like gems throughout the State; note the fact that in one and all of them that the people are jubilant, confident; that conditions are all favorable and in every respect fully on a par with those of St. Louis; visit the towns and villages, mingle with the farmers, talk to the people—all classes, the merchant, the trader, the stock man, the laborer. You will find few, if any, pessimists among them; all seem to be imbued with the spirit of progress, of success. Finally, if you are in doubt, come and sit with me on the platform of beautiful Webster Park Station, count the trains as they go by, watch the army of track men adjusting the roadbed, the painters touching up the warning signs, the switch levers and telephone poles, the landscape man putting in shape the parkings along the company's reserve—all this along the Missouri Pacific, a road now in the hands of a receiver.

In the meantime listen to the almost continuous rattle of trains passing over the tracks of the Frisco (another road in the hands of a receiver), scarcely a stone's throw distant.

When I came here freight trains over the Missouri Pacific were few and generally far between, with a scant number of cars to each. Today they are so continuous as to discourage all effort to keep track of them, while to count the cars, drawn in many instances by mighty twin engines in some of the trains, would tire the patience of even a patient man. Not infrequently behind a double team of locomotives I have counted as high as 80 heavily-laden cars, 60 or more of them being not only foreign to the road, but foreign to the State, covering all sections, including Canada and British America.

While the tracks of the Frisco have not been so much under my eyes, I judge from the rattling of passing trains that about the same conditions prevail on that road.

In suburban, interurban and through passenger traffic the increase in trains has been so material as to require frequent reference to time tables, especially upon the part of commuters. One particularly notable feature is in the improved appearance of the rolling stock. Today a seemingly resplendent new coach, tomorrow another, and still another, until one morning as you sit out on the station platform a train of eight or ten freshly-decorated coaches, crowded with passengers, flashes by. If the coaches are not all new, they look nice enough to be.

So far as my observation goes, everyone out here is using strenuous efforts to meet the rapidly-increasing demands of prosperity, and, unless all signs fail, the crippled railways will soon crawl out from receivership, and the nation, particularly the West, the South and the Southwest, will enter upon an extended period of prosperity.

In addition to ocular evidence as to the coming good times, I am much gratified to be able to present something oracular. It would seem from the proceedings of the Missouri Public Service Commission, had at Jefferson City on the 14th inst., that the authorities had determined to pursue a more liberal policy with the railways of the State, for, in addition to granting some special privileges to the Missouri Southern, a local road only 50 miles in length, it adopted new rules of general application to all of the railroads in Missouri. The passenger rates have been increased from 2 to 2½ cents a mile, and an increase on nearly all commodity rates was granted, ranging from 3 to 38 per cent., with general increase upon all freight rates estimated at 5 per cent. The relief granted, as well as the spirit manifested by the commission in the new rules adopted, as well as in discussion and action on numerous other important matters, have given great encouragement to the railroads of the State, and should operate in the direction of continuing and even accelerating prosperity and development.

F. M. POSEGATE.

News and Views from Our Readers

New Orleans Machinery Going Into Latin-American Countries.

A. M. LOCKETT & Co., New Orleans, La.

The concerns in New Orleans who make a specialty of manufacturing sugar machinery have done considerable business in Cuba this last season. We understand that Dibert, Bancroft & Ross have done a very large business, and one of John H. Murphy's men tells us that the only regret he has is that they did not get their representative in Cuba early enough to get more of this business, as they easily secured all that they could do in the limited time available after their representative went there.

We, ourselves, have not sold any machinery directly to the planters in Cuba or Mexico, as the concerns whom we represent all have export departments or offices in these countries. We have, however, sold a number of pumps to local people for shipment to Cuba.

Almost the only machinery which we manufacture ourselves is our equipment for burning oil fuel. We recently sold an installation of this equipment consisting of oil pumping outfit and burners to the Porto Rican American Tobacco Co. at San Juan, Porto Rico. We understand that considerable oil fuel is being used in both Porto Rico and Cuba.

There has been a good deal of machinery shipped from New Orleans to Ceiba, British Honduras. Some of this is for sugar-house work and some for distillery work.

Has Tested Bad and Dirty Hotels.

W. S. Gilbreath, Field Secretary the Dixie Highway Association, Chattanooga, Tenn.

I note, with a good deal of interest, your article in the last issue of the MANUFACTURERS RECORD, headed "The Disgrace of Dirty and Insanitary Hotels." I am in a very good position to endorse every word you say on the proposition. It seems to be my duty, and anything but pleasure, at times to stop at some of these places.

On our recent tour of inspection, from Chicago to Miami, we ran across some very deplorable conditions. Mr. Carl G. Fisher of Indianapolis particularly called our attention to the importance of the work we have in hand, on this score, that is, trying to inspire the citizens in communities to improve just these conditions. I know from personal experience that there are a great many places along the line of the Dixie Highway which, if I were touring through with my wife and family, I would like very much to stop over and visit, but the hotel conditions would really make such a stop-over a hardship rather than a pleasure. I sincerely hope that you will keep up the good work, and if I can be of assistance to you in any way, do not hesitate to advise.

Suggests a Chain of Good Clean Hotels.

L. T. JONES, 206 W. 70th Street, New York.

I have read with interest your recent articles on the miserable, insanitary hotels in some Southern towns, and am thoroughly in accord with your views on the subject. As you say, many a town has been "dodged" by travelers and given a bad name throughout the land simply on account of its disgraceful hotel accommodations. On the other hand, travelers will go out of their way to "Sunday" in a town possessing a clean, well-managed hotel, having well-cooked and nicely-served meals.

It seems to me that there is a good opportunity for a capable hotel man, with some capital back of him, to start a chain of commercial hotels in the smaller cities of the South. Great economies in the operation of the hotels could be effected by having all built on the same general plan, by standardizing the furnishings and equipment, and by establishing a central buying department under a competent hotel purchasing agent. In other words, the chain could be conducted somewhat in the way the Pullman Company conducts its sleeping and

dining-car service, or as the popular chain restaurants are managed.

By keeping the hotels in the cleanest and most sanitary condition, by paying particular attention to the culinary department, serving well-cooked Southern dishes, and by insisting upon a high standard of service I am sure that the hotels of such a chain would not lack patronage, and would be certain to make money for its promoters.

It is hardly necessary to add that when a traveling man has stopped at one of the hotels conducted upon such principles, received courteous treatment, given a good, wholesome meal and placed for the night in a clean, comfortable room, he is certainly going to look up a hotel under the same management in the next town he stops and is going to pass the good word along to other travelers.

BRINGING BUYER AND SELLER TOGETHER.

Wants to Reach Manufacturers of Peanut Oil.

A. PATORNO & SON, Dumaine and Chartres Streets, New Orleans, La.

We desire to be put in communication with manufacturers of peanut oil. We are regular readers of MANUFACTURERS RECORD, and, judging by the number of want ads. for peanut machinery in your journal, we thought that possibly you could furnish us with the desired information.

Wants to Reach Purchasers of Peanut Products.

G. L. BRANNON, Assistant Cashier the First National Bank, Midland City, Ala.

Please put us in touch with parties who are interested in the purchase of peanut oil; also other peanut products.

Wants "Preparedness" Editorials in Pamphlet Form.

J. K. DE LOACH, Manager Southern Machinery Exchange, Jacksonville, Fla.

All students of present conditions must be impressed with the sanity of your attitude on preparedness.

The present war in Europe has shown conclusively the weakness of the volunteer system and its proper substitute, the mobilizing of a nation's resources of men and material. Steel mills are as necessary as forts, and machinists and puddlers as valuable as infantry and artillery. Since the very existence of the latter are dependent on the products of the former, what more reasonable than that they should be strategically placed for a proper distribution of their products and their ultimate protection from an invader?

Wouldn't it be a good idea to get out a leaflet on this subject that we could send out to our mailing lists? I will gladly stand my pro rata of the expense.

[The "Preparedness" editorials have been issued in leaflet form, and can be had in any quantity desired at 3 cents a copy in lots over 25.—Ed. MANUFACTURERS RECORD.]

Saloon Apologists Hard Pressed for Argument

BISHOP WARREN A. CANDLER, Chancellor's Office, Emory University, Atlanta, Ga.

I note your article in your issue of November 18, headed "The Whiskey Curse Economically and Morally," and I desire to say that the National Bulletin utterly misapplies the words of mine which you quote and which you comment upon correctly. I am a total abstainer and a prohibitionist. I look upon the saloon interest as economically wasteful and morally wicked. My words which the National Bulletin publishes were spoken in the course of an address before the Convention of the Ad. Men's Clubs of the World in Chicago last June, and had not the remotest reference to the

issue of prohibition. I was addressing a commercial body, and was discussing certain novelties of economic legislation which have been advocated in certain quarters of our country during the last several years under the name of "Reform Legislation." That was all the matter which I presented in the remarks quoted. The National Bulletin and other apologists for the saloon interests must be hard pressed for argument if they can find nothing else to use except such utterances as mine, which had no reference to moral reform whatever.

Iron Ore in East Tennessee.

C. N. BRADY, Chairman, Hazel-Atlas Glass Co., Washington, Pa.

In the New York Times, in article telegraphed from Baltimore, dated November 24, I notice your comment on our inland ore supplies. It surely has great sense, and I am, therefore, calling your attention to the fact that there is probably the largest deposit of brown ore in the South in Wayne county, Tennessee, owned by the Tennessee Valley Iron & Railway Co., that is looking for development.

If you can put me in touch with people who are financially able to help me develop this property I am sure it will be the nucleus for what your article calls attention to—that is, an inland source of iron ore that is not dependent upon lake or foreign transportation.

Development of Southern Mineral Resources Essential to Effective Defense.

Daily Bulletin, Chamber of Commerce, Pine Bluff, Ark.

The masterful articles appearing in the Baltimore MANUFACTURERS RECORD for the past several weeks on National Preparedness are meeting with approval in every section of the country. This great national journal has proven to the world that to have an effective defense the South's great mineral deposits must be developed and manufacturing plants established therein. At present 90 per cent. of our iron and steel industry is based on Lake Superior ores, which by the closing or capture by an enemy of one mile of canal would compel a complete shutdown. We must not remain longer at the mercy of this small area, especially when the South has untold millions of the same ores and just as good shipping facilities and a superior Anglo-Saxon population.

Wants Location for Small Oak Lumber Plant.

V. D. STONEROAD, Millin Company, Georgetown, Pa.

We want to locate in a small town in a good section for oak lumber to manufacture house finish specialty. Would use two cars Nos. 1 and 2 4-4 oak per week. Would prefer to rent building and power; 30 to 40 horse-power will start us. Want self-feed rip-saws, 24-inch double sectional roll, cabinet planer, gang rip-saws, etc. Southwestern Virginia or West Virginia or Eastern Tennessee would suit. Would be glad to know of an idle mill or power we could rent or buy.

The Proper Way to Advertise Your Wants.

THE GOONEY MANOR COPPER CO., INC., Front Royal, Virginia.

Your ad. of our wants brought us bids from Los Angeles to Boston and the Great Lakes to the Gulf of Mexico. We thank you kindly.

Conditions in Mexico Improving.

PHILIP G. ROEDER, Mexico City, Mexico.

Things here are looking up, and we oldtimers look for good business in the near future.

SUGAR FACTORIES IN CUBA ADOPTING MODERN TYPE OF CONSTRUCTION AND EQUIPMENT.

As indicative of the tremendous activity which is completely modernizing the sugar industry of Cuba, illustrations are given herewith of construction work being done on two factories with material furnished by the Virginia Bridge & Iron Co. of Roanoke. Impressive as these illustrations are of the character of the im-

provements being made, it is reported that these are simply types of the work which is being done all over Cuba. The sugar-making industry of Cuba is being put on an entirely modern basis. It is reported that the manufacturers of sugar machinery in Atlanta, Birmingham, New Orleans and elsewhere are now, and have been for some time, busily engaged in furnishing machinery to the various sugar companies in Cuba. It is also reported that following the complete rehabilitation of the Cuban factories, it is in evidence that a movement will shortly be under way in Mexico in the direction of modernizing and widely extending the sugar-making activities of that republic.

One of the illustrations herewith presented shows

Both of these factories are of similar design and con-

struction, being exact duplicates except that the Menocal Factory is longer than the Guantanamo, in about the same proportion as their daily capacities. The same details of trusses, columns, etc., were used, but, of course, the number of panels was reduced in the smaller mill. These mills are two of three similar factories built during this year for which the Virginia Bridge & Iron Co. furnished the steel.

The factories are of standard steel construction throughout, structural steel-frame trusses and columns, galvanized corrugated steel roofing and siding and steel sash. Contrary to the usual custom of mills built in this country, the floors are of wood.

The Menocal Sugar Factory is about 230 feet long

and on into the warehouse, from which the finished product is delivered to cars for shipment.

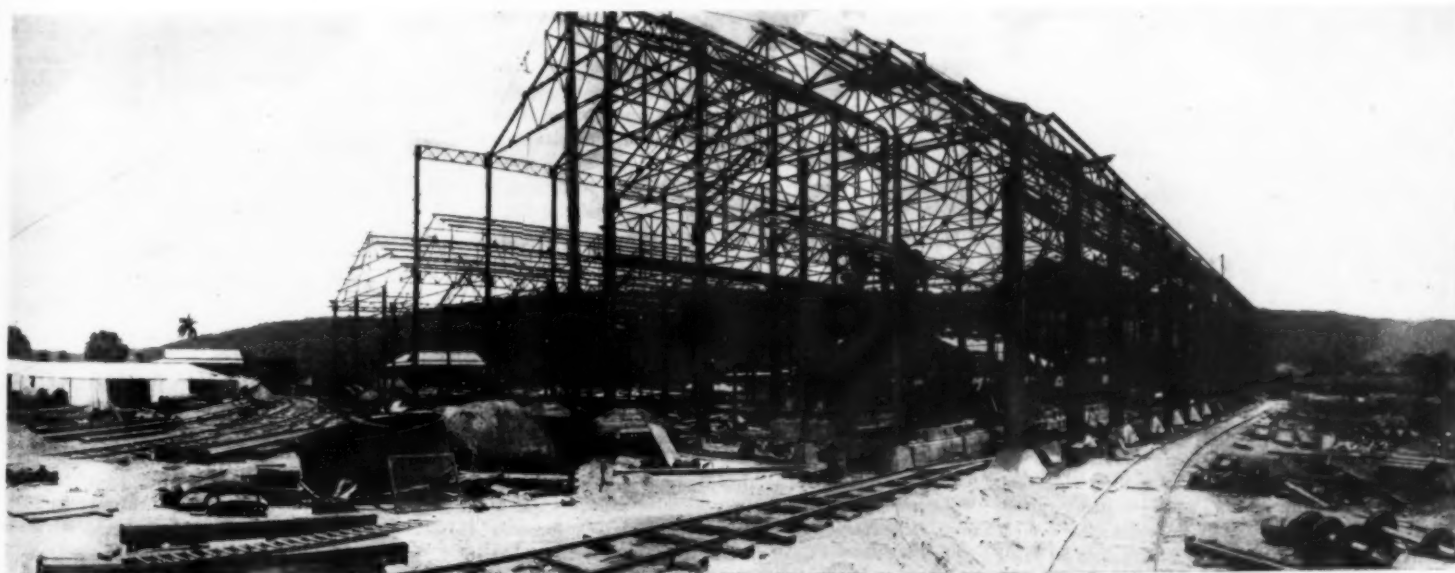
The Guantanamo Factory is arranged on the same plant, but is only about two-thirds as large as the Menocal Factory.

The Dibert, Bancroft & Ross Company, New Orleans, which is a large contractor for sugar-mill work in Louisiana and Cuba, was the general contractor, and provided all machinery and equipment, but the Virginia Bridge Co., which furnished the structural steel, is stated to have been largely responsible for the actual design and arrangement of the buildings themselves.

This work is a good illustration of how Southern interests are pushing out for foreign trade.



MENOCAL SUGAR FACTORY, CENTRAL PALMA, CUBA. DAILY CAPACITY, 1000 TONS.



GUANTANAMO VALLEY SUGAR FACTORY, CENTRAL ERMITA, CUBA. DAILY CAPACITY, 600 TONS.

Poole Engineering & Machine Co. Reincorporation.

The Poole Engineering & Machine Co., Baltimore, has been incorporated under Delaware laws with a capital stock of \$3,000,000 and a bond issue of \$500,000, to succeed the present corporation of the same name. This corporation has a 20-acre site and a large plant to which very important additions are being made at a cost of about \$800,000, the improvements including the remodeling of buildings, the erection of additional structures, the installation of additional new machinery, etc.

At Texas, near Baltimore, the company has a 350-acre site for proving ground and for a loading station which is about completed. The company has war munition contracts from Europe amounting to \$17,785,000, and is equipped to manufacture large quantities of 3, 6 and 12-inch shells and one-pounder rapid-fire machine guns and shells. It states that 95 per cent. of its new machinery for increased output will be useful in its regular business, the capacity of which will be increased about four times. The plant is operating at full capacity on its usual trade, besides meeting the munition contracts.

Motor Bus and Motor Boat Lines.

The West Shore Transit Co. has applied to the Maryland Public Service Commission for authority to issue 4000 shares of stock of \$10 par value, and it proposes to operate motor omnibusses on the Western and Eastern Shores of Maryland between Annapolis, Washington, West River, Solomon's Island, Owensville, Fairmont, Pocomoke, Crisfield and Salisbury. A motorboat line across Chesapeake Bay between Crisfield and Solomons is also proposed. W. P. Lawson, P. H. Lawson and P. H. Briscoe are the petitioners.

Industrial Developments at Richmond: Possibilities for Large Industries

[Special Correspondence Manufacturers Record.]

Richmond, Va., Nov. 29.

Richmond's advancement in recent years has been very marked, and its growth in commerce and industry is based largely upon its development of the rich resources of the surrounding country and the attention given to its manufacturing. A visit to the manufacturers' exhibit of the Chamber of Commerce may not be in the nature of a revelation to those most familiar with what Richmond has been doing in the past 10 or 15 years, but to any thoughtful observer the showing is remarkable. The city may well be proud of this accomplishment, and the idea ought to be adopted by many other cities in the South with nothing like Richmond's population and importance.

In a number of respects Richmond occupies a particularly favorable position in manufacturing. It has very large plants for the manufacture of flavoring extracts, blotting paper, baking powder, meat juice; there are thriving industries in woodworking, paper-box making, flour milling, shoe manufacturing and such widely separated lines as the building of locomotives and the bottling of pickles. The fertilizer plants are important.

Raw materials are close at hand and can be delivered in Richmond at low cost. Coal is secured from the Kanawha and New River fields over the Chesapeake & Ohio railway. The Virginia iron ore fields are extensive; the output is of a good grade and easily worked. As the demand becomes greater the ore fields will be drawn upon for a much larger supply than they have heretofore furnished; the supply is ample for all needs present and prospective. Limestone can be delivered in Richmond f. o. b. the plant where it is needed for \$1.60 a ton or better.

In furthering the development of Richmond's manufactures the Rappahannock Land and Development Corporation is offering free sites for industries adjacent to the city and along the line of the Richmond and Rappahannock River Railway. Sound enterprises requiring additional capital can be given assistance also in a financial way. One branch of the road runs to Seven Pines, the main line extending to Pamunkey, Va., a distance of a little over 16 miles from Richmond, where the city terminus and local offices are located at Twentieth and P streets. The plans provide for a considerable extension of the railway, with an ultimate terminus at some point on tidewater. At present there is direct connection with the lines of the Chesapeake and Ohio, affording ample shipping connections with tidewater and with the West.

In going over the line one cannot fail to be favorably impressed from a physical standpoint with the character of the country through which it runs. It possesses distinct possibilities as a suburban development, but this feature has, as a matter of fact, not yet been definitely considered by the management. The country is rolling, well cultivated, traversed by good roads, and impresses the observer first of all as worth-while land agriculturally. It is. From Gaines Mill to the Cold Harbor section and beyond to the Pamunkey River the country is famous for its trucking products, which are grown in great variety and large quantity. Sweet potatoes, Irish potatoes, cabbage, tomatoes, lettuce, watermelons, beans and black-eyed peas find a good market in Richmond. Alfalfa is successfully grown. There is under consideration a produce exchange, which would take care of the outside demand and arrange for markets in other sections.

Negotiations are definitely under way for the establishment of a canning factory, and from all indications more than one such factory could run here with profit to itself and advantage to the country.

There are a number of dairies established already along the Richmond and Rappahannock Railway, and there are more in prospect. Richmond is a splendid winter and summer market for milk and can support more dairies than the nearby territory at present affords. Additional dairies are needed and desired.

Another inducement to new industries offered by the Rappahannock Land and Development Corporation along the line of the railway is free sidings. Not only is the land furnished free, but railroad sidings will be built

direct to the factory building without cost to the manufacturer. This is an item of considerable importance, representing a saving to the new industry of from \$500 to \$1000 in each case.

The power supply is ample for all purposes and is furnished at low cost. It is secured from the Virginia Railway and Power Company, the price on contract for electric current being 1 cent per kilowatt hour.

The Richmond and Rappahannock River Railway uses steam locomotives for its freight trains and both gasoline and electric power for its passenger coaches. During the summer season excursions are run over the road to Pamunkey; the natural beauty of the country, its historic value and the popularity of its fishing and hunting resorts all tend to stimulate the passenger traffic. The car shops are at Henrico; here the repairs are made and the equipment of the road kept in order.

A few miles out of Richmond the railway crosses the Chickahominy River, which stream has a minimum flow in the dry season of 20,000,000 feet of water in 24 hours. In the valley of this river is more than ample ground to accommodate a steel plant or other large industry. It may not be amiss to refer in this connection to the statement of one of the largest steel men in the country that the Rappahannock Land and Development Corporation possesses a more desirable site for a steel plant than that occupied by the Bethlehem Steel Company. It can only be a question of time, therefore, when industries of large size and great importance take advantage of this favorable location and give added impetus to the development of this section.

The problem of labor, which is such a vital question in the life of all industrial communities, should be greatly simplified here, as there are within walking distance of these properties 3500 or more mill operatives, chiefly native born. There is also ample female help, which is a distinct element of advantage in textile operations.

The Rappahannock Land and Development Corporation has been in existence for only a few years, and in the main it may be said that its work in the direction of bringing new industries to Richmond and vicinity is in its infancy; it is a big work, large in its conception, and its execution will require time and consistent effort. The company has the reputation of being soundly backed and well conducted, and as its operations become more widely known and the advantages of its industrial sites more keenly appreciated it should fill a very large place in the industrial and commercial development of the city of Richmond.

\$15,000,000 COMPANY TO MAKE CHEMICALS IN SOUTH.

Headed by Du Pont Powder Interests.

The Federal Dyestuff & Chemical Co., recently reported in the MANUFACTURERS RECORD as to build a large plant at Kingsport, Tenn., has been chartered under Delaware laws with a capital stock of \$15,000,000 and organized with the following officers: Chairman of directors, A. B. du Pont of E. I. du Pont de Nemours & Co., Wilmington, Del.; vice-presidents, John C. Hebdon (the company's chemical engineer, and formerly with the Cassella Color Co., distributor of German dyestuffs) and Walter A. Guile, Jr.; treasurer, Allison M. Archer of White & Co. of New York. The company's Eastern offices are at 30 Pine street, New York.

At Kingsport the company has a 200-acre site, and has begun the construction of buildings, the first unit being 75x70 feet, in which to install machinery for manufacturing sulphur black to dye cotton cloth, picric acid, sulphuric acid, benzol, etc. It is stated that an order has been received for 500,000 pounds of sulphur black, and that offers have been received for other products to consume the capacity of the plant for the next three years. The output of picric acid during 1916 is proposed to be 18,000 tons, and it is reported that a foreign government is negotiating for this entire capacity.

\$30,000,000 of Work at One Shipyard—Contracts for Four Additional Ships.

The Newport News (Va.) Shipbuilding & Drydock Co. wires the MANUFACTURERS RECORD that it has secured contracts for four additional ships, but that details are not yet available. An unconfirmed report states that two of these vessels will be oil-tank steamers and two will be freight steamers, the estimated cost being \$4,000,000. These contracts, added to those already on hand, will make an aggregate of about \$30,000,000 work at this yard.

Freight Congestion Due to Railroads More Than to Lack of Ships.

[Special Dispatch to Manufacturers Record.]

New York, November 30.

With three railroads having declared embargoes, wholly or in part, on export shipments from New York, and other roads practically overwhelmed with freight destined for foreign countries, conditions at this port are chaotic.

Investigation confirms the statements heretofore made to the MANUFACTURERS RECORD that the present situation is due only in part to lack of ships for overseas trade. The largest factors in the present muddle are those within the railroad camp.

Since the trouble, starting two months ago between the roads and their freight handlers, the situation here has been growing worse. Today inability of the roads to deliver oceangoing freight at the time called for by steamships causes boats to sail underloaded, or in some instances with poor class cargoes.

Lack of lighterage facilities, insufficient terminals and inability to move goods rapidly may be accurately listed as the chief causes of the congestion.

While it is true that there are too few ships to care satisfactorily for the tremendous outward movement of the American products, the fact that the tonnage volume going out is from 20 to 35 per cent. greater than ever before for corresponding periods is proof that the trouble lies chiefly with the railroads and their terminal facilities, plus the scarcity of lighters for harbor loading.

It was congestion of terminals rather than lack of ships that caused the Pennsylvania and Baltimore & Ohio to follow the Lackawanna's declaration of embargo.

Freight ships have been delayed in some instances from 8 to 14 days waiting in harbor for cargoes, while from 30,000 to 40,000 cars on railroad sidings loaded with export merchandise cannot be unloaded.

To help the situation, the New York Canal Commission will keep State canals open as late as the season will permit. Lumber and flour from the West and iron and steel products from steel districts are being held back to allow the quick handling of lighter products.

W. A. EDWARDS.

Shipowners Prefer Smaller Profits and Less Risk.

The offer for sale of 19 steamships, which appears in an advertisement in this week's MANUFACTURERS RECORD from the Waters Realty Co. of Walton, Fla., prompted an inquiry from MANUFACTURERS RECORD to the Waters company as to the reasons for the sale. A reply from the Waters Realty Co. states that the ships are engaged in foreign trade, and that, in the opinion of the company, the principal reason why they are offered for sale is that the owners have not been accustomed to war on the high seas and want to avoid the anxiety and risk that owners of boats engaged in foreign trade incur at this time, and they prefer to sell and invest their capital where it is less exposed, even though it will be at a greatly reduced profit. Admitting that shipowners are making enormous profits at present, it is suggested that the high rate of insurance, although overcome by the great increase in freight and passenger rates, still has its effect on the owners of the ships that are offered, although the principal reason is the risk of the loss of ships engaged in foreign trade.

Col. Theodore Roosevelt's Call to the Conscience of Every Honest-Hearted American

The following letter by Mr. Roosevelt to Mr. Samuel T. Dutton, secretary of the American Committee for American and Syrian Relief in New York, ought to be read by every American:

"My Dear Mr. Dutton—Even to nerves dulled and jaded by the heaped-up horrors of the last year and a half the news of the terrible fate that has befallen the Armenians must give a fresh shock of sympathy and indignation. Let me emphatically point out that the sympathy is useless unless it is accompanied with indignation, and that the indignation is useless if it exhausts itself in words instead of taking shape in deeds.

"If this people through its Government had not shirked its duty in Mexico for the last five years, and if this people through its Government had not shirked its duty in connection with the world war for the last sixteen months, we would now be able to take effective action on behalf of Armenia. Mass-meetings on behalf of the Armenians amount to nothing whatever if they are mere methods of giving a sentimental, but ineffective and safe, outlet to the feelings of those engaged in them. Indeed, they amount to less than nothing. The habit of giving expression to feelings without following the expression by action is in the end thoroughly detrimental both to the will power and to the morality of the persons concerned.

"As long as this Government proceeds, whether as regards Mexico or as regards Germany, whether as regards the European war or as regards Belgium, on the principles of the peace-at-any-price man, of the professional pacifist, just so long it will be as absolutely ineffective for international righteousness as China itself. The men who act on the motto of 'safety first' are acting up to a motto which could be appropriately used by the men on a sinking steamship who jumped into the boats ahead of the women and children and who at least do not commemorate this fact by wearing buttons with 'safety first' on them as a device. Until we put honor and duty first and are willing to risk something in order to achieve righteousness both for ourselves and for others we shall accomplish nothing, and we shall earn and deserve the contempt of the strong nations of mankind.

No "Turkish Vote" in America.

"One reason why I do not wish to take part in a mass-meeting only for the denunciation of the atrocities committed on the Armenians is because there are ignoble souls who have preached professional pacifism as a creed or who have refused to attend similar meetings on behalf of the Belgians, who yet do not fear to take such action on behalf of the Armenians—for the simple reason that there is in America no Turkish vote, and because Turkey is not our neighbor, as Mexico is, and not a formidable aggressive power like Germany, and so it is safe both politically and materially to denounce her.

"The American professional pacifists—the American men and women of the peace-at-any-price type who join in meetings to 'denounce war' or with empty words 'protest' on behalf of the Armenians or other tortured and ruined people—carry precisely the weight that an equal number of Chinese pacifists would carry if at a similar meeting they went through similar antics in Peking. They do harm instead of good and they deeply discredit the nation to which they belong.

"It was announced the other day by certain politicians interested in securing votes that at the end of the war this Government would 'insist' on Russia and Roumania doing justice to all Jews. The conduct of this Government during the present war and its utter refusal to back words with deeds has made it utterly unable to 'insist' on anything of the kind, whether as regards Russia and Roumania or any other Power. A nation too timid to protect its own men, women and children from murder and outrage, and too timid even to speak on behalf of Belgium, will not carry much weight by 'protest' or 'insistence' on behalf of the suffering Jews and Armenians. Foreign Powers will attribute such 'protest' or 'insistence,' coupled with our failure to act in cases of other nationalities, merely to the fact that there is in this country neither a Russian

nor a Turkish vote—and will in consequence despise our actions.

"All of the terrible iniquities of the last year and a half, including this crowning iniquity of the wholesale slaughter of the Armenians, can be traced directly to the initial wrong committed on Belgium by her invasion and subjugation, and the criminal responsibility of Germany must be shared by the neutral Powers, headed by the United States, for their failure to protest when this initial wrong was committed.

"Timid Abandonment of Duty."

"In the case of the United States additional responsibility rests upon it because its lack of influence for justice and peace during the last sixteen months has been largely due to the course of timid and unworthy abandonment of duty which it has followed for nearly five years as regards Mexico. Scores of our soldiers have been killed and wounded, hundreds of our civilians, both men and women, have been murdered or outraged in person or property by the Mexicans, and we have not only taken no action, but have permitted arms to be exported to the bandits who are cutting one another's throats in Mexico and who used these arms to kill Americans; and although we have refused to help our own citizens against any of these chiefs of these bandits, we have now and then improperly helped one chief against another.

"The failure to do our duty in Mexico created the contempt which made Germany rightfully think it safe to go into the wholesale murder that accompanied the sinking of the Lusitania, and the failure to do our duty in the case of the Lusitania made Germany, acting through Austria, rightfully think it safe to go into the wholesale murder that marked the sinking of the Ancona.

"The invasion of Belgium was followed by a policy of terrorism toward the Belgian population—the shooting of men, women and children, the destruction of Dinant and Louvain and many other places; the bombardment of unfortified places, not only by ships and by land forces, but by air craft, resulting in the killing of many hundreds of civilians, men, women and children, in England, France, Belgium and Italy; in the destruction of mighty temples and great monuments of art in Rheims, in Venice, in Verona. The devastation of Poland and Serbia has been awful beyond description, and has been associated with infamies surpassing those of the dreadful religious and racial wars of seventeenth-century Europe.

"Such deeds as have been done by the nominally Christian Powers in Europe, from the invasion of Belgium by Germany to the killing of Miss Cavell by the German Government, things done wholesale, things done retail, have been such as we had hoped would never again occur in civilized warfare. They are far worse than anything that has occurred in any wars since the close of the Napoleonic contests a century ago. Such a deed as the execution of Miss Cavell, for instance, would have been utterly impossible in the days of the worst excitement during our Civil War.

Neutrality in Wrongdoing.

"For all of this the pacifist who dare not speak for righteousness and who possess such an unpleasant and evil prominence in the United States must share the responsibility with the most brutal type of militarists. The weak and timid milk-and-water policy of the professional pacifist is just as responsible as the blood-and-iron policy of the worthless and unscrupulous militarists for the terrible recrudescence of evil on a gigantic scale in the civilized world.

"The crowning outrage has been committed by the Turks on the Armenians. They have suffered atrocities so hideous that it is difficult to name them—atrocities such as those inflicted upon conquered nations by the followers of Attila and of Genghis Khan. It is dreadful to think that these things can be done and that this nation nevertheless remains 'neutral' not only in deed, but in thought, between right and the most hideous wrong, neutral between despairing and hunted

people whose little children are murdered and their women outraged by the victorious and evil wrongdoers.

"There are many sincere and wise men in China who are now endeavoring to lift China from the old conditions. These old conditions made her the greatest example of a pacifistic, peace-at-any-price, non-militaristic people. Because of their cult of pacifism the Chinese, like the Koreans, and utterly unlike the Japanese, became absolutely powerless to defend themselves or to win or retain the respect of other nations. They were also, of course, utterly helpless to work for the good of others.

"The professional pacifists of the United States are seeking to make the United States follow the footsteps of China. They represent what has been, on the whole, the most evil influence at work in the United States for the last fifty years, and for five years they have in international affairs shaped our Government policy. These men, whether politicians, publicists, college presidents, capitalists, labor leaders or self-styled philanthropists, have done everything they could to relax the fiber of the American character and weaken the strength of the American will. They teach our people to seek that debasing security which is to be found in love of ease, in fear of risk, in the timid effort to avoid any duty that is hard or hazardous—a security which purchases peace in the present not only at the cost of humiliation in the present, but at the cost of disaster in the future. They are seeking to Chinify this country.

Must Put Honor Above Safety.

"In so doing they not only make us work for our own undoing and for the ultimate ruin of the great democratic experiment for which our great American Republic stands, but they also render us utterly powerless to work for others. We have refused to do our duty by Belgium; we refuse to do our duty by Armenia, because we have deified peace at any price, because we have preached and practiced that evil pacifism which is the complement to and the encouragement of alien militarism. Such pacifism puts peace above righteousness, safety in the present above both duty in the present and safety in the future.

"I trust that all Americans worthy of the name feel their deepest indignation and keenest sympathy aroused by the dreadful Armenian atrocities. I trust that they feel in the same way about the ruin of Belgium's nationality, and realize that a peace obtained without restoring Belgium to its people and righting the wrongs of the Armenians would be worse than any war. I trust they realize that unless America prepares to defend herself she can perform no duty to others, and under such circumstances she earns only derision if she prattles about forming a league for world peace or about arbitration treaties and disarmament proposals, and commission-investigation treaties such as the unspeakably foolish ones negotiated a year or two ago at Washington and promptly disregarded by the very administration that negotiated them.

"Let us realize that the words of the weakling and the coward, of the pacifist and the poltroon are worthless to stop wrongdoing. Wrongdoing will only be stopped by men who are brave as well as just, who put honor above safety, who are true to a lofty ideal of duty, who prepare in advance to make their strength effective and who shrink from no hazard, not even the final hazard of war, if necessary, in order to serve the great cause of righteousness. When our people take this stand we will also be able effectively to take a stand in international matters which shall prevent such cataclysms of wrong as have been witnessed in Belgium and on even graver scale in Armenia.

"Sincerely yours,

THEODORE ROOSEVELT.

"November 24, 1915."

Want 50,000 Crossties.

Wilmer Bros., dealers in railway ties, etc., Box No. 1, Washington, D. C., write to the MANUFACTURERS RECORD that they want 50,000 mixed crossties, sawn or hewn on four sides, 7x8 inches by 8 feet 6 inches; sawn on two sides 7x7 inches by 8 feet 6 inches. Prices are invited loaded on barge or steamer, stating place of loading and earliest delivery.

Fifty-Million-Dollar Company to Promote Foreign Trade

[Special Dispatch to Manufacturers Record.]

New York, Nov. 30.

A coalition of the three greatest financial powers in the United States—supported by less powerful but highly influential interests—has brought about the formation of the biggest foreign trade enterprise yet attempted in this country.

The American International Corporation, organized chiefly through the efforts of Frank A. Vanderlip, president of the National City Bank, has a capital stock of \$50,000,000. It has a potential business power of half a billion dollars, and when occasion demands its capitalization for the purpose of enlarging American trade interests abroad will probably be limited only by the needs.

The new company brings into close business relations the National City Bank, with its great banking machinery; J. P. Morgan & Co. and their far-reaching banking clientele; the Rockefeller and Standard Oil interests, and, besides these, the influential banking houses of Kuhn, Loeb & Co. and the greatest manufacturing, railroad and mining corporations in the United States.

The new corporation's most impressive list of directors includes:

Frank A. Vanderlip, president of the National City Bank, chairman of the board; Charles A. Stone, of Stone & Webster, president; J. Ogden Armour, Armour & Co.; Charles A. Coffin, General Electric Co.; Wm. E. Corey, Midvale Steel & Ordnance Co.; Robert Dollar, Dollar Steamship Co.; James J. Hill, Great Northern Railway Co.; Otto H. Kuhn, Kuhn, Loeb & Co.; Robert S. Lovett, Union Pacific R. R. Co.; Joseph P. Grace, W. R. Grace & Co.; Percy A. Rockefeller, Standard Oil Co.; Ambrose Monell, International Nickel Co.; Henry S. Pritchett, Carnegie Foundation; John D. Ryan, Anaconda Copper Co.; Charles H. Sabin, Guaranty Trust Co.; Wm. L. Saunders, Ingersoll-Rand Co.; James A. Stillman, National City Bank; Theodore N. Vail, American Telephone & Telegraph Co.; Edwin S. Webster, Stone & Webster; Albert H. Wiggin, Chase National Bank; Beekman Winthrop, Robert Winthrop & Co.; Willard D. Straight, J. P. Morgan & Co.

Concerning the corporation and its objects, Mr. Vanderlip said:

"I think it will be recognized that we have secured a wonderful group of successful men for the board.

"The management will be the very heart of the attempt, and widespread operations contemplated made it essential to obtain big men who have been conspicuously successful in big things. We have made a great beginning by getting Mr. Stone to head the company.

"We are in a very extraordinary state of world affairs. That is the reason for forming this company. Those sources of capital that were drawn for new projects in various parts of the world are closed by the war. They are likely to remain closed for some time. The result is that in many countries going concerns are urgently in need of capital. They are coming to the United States as the only place to get it. We have been getting applications for help in this direction from many sources.

"We have no international banking houses with the proper branches where needed. We hope to build up such an organization through the National City Bank and to accomplish in foreign fields what our domestic banks do for American industries.

"I regard the project as much more important than an effort to make money. It will stand for the development of America along international lines. The situation we find ourselves in demands this."

The plans of the company were outlined to governmental officials in advance of the organization and no objection was made.

Emphasis is laid by President Stone and his associates on the fact that the American International Corporation is not a banking venture. The National City Bank will handle all banking transactions as they arrive through its foreign branches.

As the greatest handicap heretofore to merchants seeking foreign trade has been the lack of American branch banks abroad, the activities of the new company are expected to have a great effect upon export trade.

Officers of the new company state that while it was

impossible to represent in the directory all companies figuring largely in the export trade, no partiality would be shown to the companies represented in the distribution of the new business brought here from abroad.

While J. P. Morgan & Co. are not directly represented on the board of directors, the firm will have a very large interest in the new company through its big investments in stock of the National City Bank. Stockholders of that concern are to have the privilege of buying stock at par on the basis of one share in the corporation for each share of bank stock held.

The far-sighted directors of the corporation believe that they have a broad-gauge plan which will mean:

1. The foremost practical measure yet undertaken on a large scale for promoting foreign trade by using American capital to foster outside enterprises.

2. A new position for the United States in world trade.

3. To create new markets or to enlarge those already made in South America, Russia, India, China, or in any country which needs the stimulus of outside capital.

4. Through financing projects in other countries to firmly intrench New York as the world's financial center and to take up the work of development which up to the war was exclusively the domain of the banks of London, Paris and Berlin.

5. To place American export business upon such a plane of closely related interests with other countries that peace in Europe will mean permanently enlarging the markets for American products instead of their predicted reduction.

Developments in Eastern Kentucky.

Whitesburg, Ky., November 29—[Special.]—That the Louisville & Nashville's North Fork extension is the "key to prosperity" to one of the richest coal areas in the whole of Eastern Kentucky is evidenced by the increased freight tonnage from her mines and forests, taxing the extension to its fullest capacity. At this time it is with much difficulty that passenger trains are operated over the road.

Hundreds of hands are employed, putting the track in good condition, ballasting, etc., while the curves are being safeguarded by a third rail the entire length of the extension from Jackson to McRoberts.

A few days ago the South East Coal Co., a new operation at Seco, a subsidiary of the North East Coal Co., operating in the Big Sandy Valley, started its initial shipments from the Boone's Fork field in this (Letcher) county, above here. The first shipments were made to Detroit for the Great Lakes trade, while hereafter much of the product will go to Ohio, Indiana and Illinois points. The South East Coal Co. will also have another development early in 1916 on the Tilden Wright place, three miles below, between Sergeant and Craftsville, the preliminary engineering work having already been started. Here they will build a first-class mining town. H. La Viers of Philadelphia is manager of the Seco plant.

George Reedy and others of Perry county are along the Louisville & Nashville in the vicinity of Roxana, below here, opening and facing up a seven-foot coal vein on the George Hogg tract. Leases will be made, it is said, and its development begun soon.

The Mineral Development Co. of Philadelphia will begin some extensive development work in the coal fields of Colly Creek, five miles above here, during the early part of the new year. Here the company owns a large boundary. The Louisville & Nashville will build a branch line of road to the property, the survey having been completed a few weeks ago. A litigation between the New York Coal Lands Co. and the Mineral Development Co. for large boundaries of fine coal lands along Line Fork Creek, in this county, perhaps kept back the Colly Creek developments during the fall months. The suit, however, has been settled, the New York company winning title to the property.

The Elkhorn Coal Co. at Kona, Ky., of which S. L. Bastin of Lexington is manager and J. Henry Hall

secretary, which began operating in the Lower Boone's Fork field about a year ago, announces a number of extensions to its plant. A new mine is to be opened early in the new year and the capacity of the plant practically doubled.

Since the announcement last week of the consolidation of the vast interests of the Elkhorn Mining Corporation in the Fleming-Haymond-Hemphill field and the Mineral Fuel Co. of Beaver Creek there has been considerable speculation as to the company's plans in Letcher county. It is now given out that some extensions will be made at Hemphill and Haymond by the opening of new mines which will necessitate the employing of several hundred additional men.

The Perry Ice & Coal Co. was organized in Hazard a few days ago by local men with ample capital and will begin business within a few days. Its plant will be located at the southern end of Hazard.

W. W. Gibson & Son of Mater, Ky., plan the installation of an electric-light plant in Whitesburg, the work to start about the first of the year.

The Letcher Building & Supply Co. is the name of a new industry for Whitesburg, which was lately organized by Wilson Franklin, R. B. Franklin and others. Owing to the extensive development of the adjacent coal fields, Whitesburg is growing.

Sumter Electrical Works Busy Making Magnetos.

Sumter, S. C., November 27—[Special.]—The Sumter Electrical Works, branch of the Splittorf Magneto Co. of Newark, manufacturer of magneto for automobiles, aeroplanes and stationary gas engines, has orders that will keep it running night and day for an indefinite period.

The Sumter Electrical Works is the successor of the Sumter Telephone Co., which went out of business in 1911. The same officers then formed a new company, which began the manufacture of magneto from the patented ideas of a local man. Later on the business was taken over as a branch of the Splittorf Company, which has been furnishing the orders to be executed under the local inventor's patents. The business has spread until the original 20,000 square feet of floor space occupied has grown to 95,000 square feet.

The company will employ, when running at full capacity, 1000 to 1200 people, half of whom will be women. The machinery is being installed daily, and it is expected that capacity will be reached within six months. At present there are four times the number of people employed that there were the first of the year.

There are other indications of prosperity in and around Sumter. General building construction has taken a recent spurt; the diversified manufacturing, such as the machinery, coffin and buggy plants, are running on full time, and the wholesale lumber dealers, of which there are a number in Sumter, are very optimistic over present business and future prospects.

To Double Freeport Sulphur Output.

Plans have been completed for doubling the output of the Freeport Sulphur Co. (S. M. Swenson & Sons of New York) at Freeport, Tex. The construction of foundations has begun, to provide for the erection of 12 additional boilers having 700 horse-power capacity each. Upon the completion of the additional installation the company will have boiler energy exceeding 16,000 registered horse-power, developing more than 22,000 horse-power. It is proposed to increase the present annual sulphur output from 200,000 to 400,000 tons. The plant uses 1600 barrels of crude oil daily.

The Cotton Movement.

In his report of November 26 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 118 days of the present season was 5,227,839 bales, an increase over the same period last year of 255,161 bales. The exports were 1,732,839 bales, an increase over last year of 505,988 bales. The takings were, by Northern spinners, 856,905 bales, an increase of 5405 bales; by Southern spinners, 1,230,705 bales, an increase of 245,560 bales.

AUGUSTA'S NEW PLAZA, A BEAUTY SPOT THAT HAS REPLACED A FORMER BARREN WASTE.

[Special Correspondence Manufacturers Record.]

Augusta, Ga., November 25.

Two years ago Barrett Plaza was only a dream. Today it is a reality, and in reality it has even exceeded the dream of the imaginative architect who drew the plans.

Barrett Plaza was designed originally to redeem a large square of land immediately in front of the Union Station and to create an object of beauty out of what was before a barren waste. In two years this has been accomplished.

Barrett Plaza is now carpeted with a turf of green

and adorned with tropical palms. There are cement sidewalks through it and paved streets around it. A marble fountain is on one side and on the other a bronze statue of the late Patrick Walsh, Augusta's distinguished editor, soldier and statesman. White Way lights shower their daylight rays upon the scene of beauty at night, and seemingly everything that taste and skill could suggest has been carried out.

And the Plaza itself is not the only development that has been made around the Union Station during the last two years. To the north of the Plaza, as one faces it from the steps of the Union Station, there has been

erected and recently opened to the public the Plaza Hotel, constructed of fireproof materials and faced with white brick and stone. On the east, across the street from the Plaza, a number of new and modern stores have been erected. Looking southeast from the station and directly south of the Plaza, the beautiful new post-office is being put in order for the force of mail service employees to occupy the building about the first of the year. The new building is three stories high, and is constructed of marble.

Augusta's "first sight" is indeed a pleasing one to the visitor.

ROY G. BOOKER.



BARRETT PLAZA, AUGUSTA, GA., A NOTABLE ACHIEVEMENT IN CITY BEAUTIFYING.

Colony of Northern Families Located in Georgia.

T. EDWIN MINHINETTE, Sales Manager Farmers' Land Loan & Title Co., Albany, Ga.

On the 4th of December 18 families, approximating 90 people, will leave Chicago for Dougherty county, Georgia, and will settle on a tract of improved farm land four miles from Albany, Ga. This is the first contingent of a colony of from 75 to 100 families who have decided to leave the snow-covered fields of Illinois and find a home and a living among the fertile fields and balmy climate of Southwest Georgia.

The Georgia end of this colony proposition was handled by the Albany Chamber of Commerce, Mr. Henry Johnson, large landowner and practical farmer and the Farmers' Land Loan & Title Co., local real estate dealers.

The tract upon which this colony will be located is on the Atlantic Coast Line Railroad, five miles east of Albany, Ga., and is one of the most productive and highly cultivated farms in this section. The land, like all the lands of Southwest Georgia, is level, and particularly adapted to general farming.

This farm has been divided into 40-acre tracts. Each tract has a dwelling, barn and outbuildings. Each family will be furnished with a mule, fresh cow, 12 chickens, a wagon, all necessary farm implements, feed for the stock until the new crop is harvested next year. An artesian well has been provided for each four families, and is conveniently located.

The terms of the contract with the owner are extremely liberal. The annual payments are small, and extend over a long period of years, and the farmer will be enabled to pay for his farm and make a living for himself and family without the fear that in case a bad crop year arrives he will be ejected and lose his savings. In case of a bad crop year provisions are made for allowing his payments to go over and be carried without loss to himself.

An absolutely complete farm plant has been provided for each family, and these thrifty farmers will begin tilling the soil and putting in winter grain and other crops within a few days after their arrival. Unlike the cold climate from which they came, Southwest Georgia presents to them 12 growing months each year, and an entire crop failure is unknown in its mild climate and among its fertile fields.

The local demonstration agricultural agent of Dougherty county will take them in charge immediately upon their arrival and will devote his entire time for some

weeks teaching them how to cultivate the soil and how to produce crops under a new climate and methods of agriculture best adapted to this section.

This is not a colonization "scheme," but an honest effort on the part of men and organizations to settle white farmers on the fertile soils of the large plantations of Georgia. The colonists come provided with enough money to pay their transportation from Chicago, and most of them have a snug "bit" laid away for a rainy day.

Coal Shipments Down Warrior River.

The Pratt Consolidated Coal Co. of Birmingham wires the MANUFACTURERS RECORD that it has let contract to James M. Campbell of Mobile for 10 coal barges, each having a capacity of 500 tons, and each 140 feet by 24 feet 8 inches deep, with a view to enlarging its coal-handling down the Warrior River to Mobile, which it has been developing for some months.

The Tennessee Coal, Iron & Railroad Co. is also developing its coal-shipping business on the Warrior, and the success of these two companies in this line of work has fully justified the predictions made during the last 25 years as to the immense value the improvement of the Warrior River by the National Government would be.

The Great Phosphate Rock Deposits in the West.

A grave problem for the farmer is to discover the needs of his depleted or unfavorably proportioned soil. Its greatest need may be phosphoric acid, one of the three substances that are most necessary in maintaining fertility, the other two being nitrogen and potash. Phosphoric acid for use in fertilizers has been supplied for many years in part by the phosphates of Florida and Tennessee and from islands in the Pacific Ocean. These deposits cannot always supply the demand, and therefore the recent discovery that the Rocky Mountains contain the largest known area of phosphate rock in the world is of vital interest to future generations, if not to the present one.

Albert Richter claims to be the original discoverer of the Western phosphate deposits, because he recognized rock phosphate in Cache county, Utah, in 1889 and located claims on it. These phosphate deposits are said to have been independently discovered in 1897 by R. A. Pidcock in Rich county, Utah, in old diggings in

black rock that he mistook for gold prospects. A large sample analyzed in 1899, however, proved to be high-grade phosphate rock. In 1908, on recommendation of the Geological Survey, the Secretary of the Interior withdrew from entry 4,500,000 acres of public land in Idaho, Utah and Wyoming, believed to be valuable for phosphate, and this phosphate withdrawal was continued by the President under the act of June 25, 1910. In 1900 and succeeding years these phosphate deposits were systematically examined by the United States Geological Survey, and in 1910 phosphate rock was discovered in Montana, near Melrose, by Geologist H. S. Gale. On January 1, 1915, the total area of phosphate lands in Montana, Utah, Wyoming and Idaho withdrawn from entry was 2,713,155 acres. This phosphate reserve is larger than any similar area in the United States; it is, indeed, the largest area of phosphate rock yet recognized in the world.—United States Geological Survey.

Rotten at the Heart.

[Life.]

But what is this war for?

It is a war to prevent a great nation with 40 years of military preparation from overwhelming Europe and dominating all the world; a war to beat dynastic rulers and military castes; a war of resistance to invasion; a war against war. Herr Hearst's advice to stop it by withholding supplies to the Allies is fair on the surface and rotten at the heart. It is advice to let dynastic militarism win; to let the war against war, so terribly costly, fail at last. Back of his plausible proposals there stands, not Christ, but anti-Christ; not justice and mercy, but treachery. We can't do much, we don't do much, but what we are doing is right as far as it goes, and we should stick to it, as of course we will, to the end.

Prosperity at Nashville.

A report from Nashville says that the Nashville, Chattanooga & St. Louis Railway's statement for October shows an increase in net operating revenue for the month of \$316,229, and it further says that practically all industry at Nashville shows prosperity, jobbing and manufacturing lines being busier than in two years.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

LINE TO BE EXTENDED.

Alabama, Tennessee & Northern Receivership Expected to Hasten Construction.

The Alabama, Tennessee & Northern Railway has been placed in a receivership. John T. Cochrane of Mobile, president of the company, and Melville W. Thompson of New York were appointed receivers by the United States District Court at Mobile, Mr. Thompson, it is said, representing banking interests who have financed the enterprise. Mr. Cochrane will continue to operate the line, which it is proposed to extend northward to connect with the Illinois Central Railroad and the St. Louis & San Francisco Railroad. He says that the company is solvent and good for all of its obligations. Mr. Thompson is chief executive officer of the Railways Development Corporation, 30 Broad street, New York.

The main line of the road extends from Nannahubba to Reform, Ala., 188 miles of standard gauge track. It also has a Mobile industrial line of six miles. Trains enter Mobile from Calvert, Ala., 30 miles, over the Southern Railway. There are 23 locomotives and 366 cars of all classes.

The directors of the company are John T. Cochrane, K. R. Guthrie and Wm. Toxey of Mobile, all of whom are officers of the road; F. J. Lisman and Wm. Goodman of New York, and J. A. Caviezel of York, Ala.

Mr. Cochrane is quoted as saying that one bondholder applied for a receivership early in October, this action being taken without the consent of the trustees of the bonds, and he then stated that the company was not in final default of interest and there was no occasion for a receivership.

"However," continued Mr. Cochrane as quoted, "the filing of this bill, like all hostile litigation, even though groundless, created a condition which rendered it impracticable to speedily carry out our plans for the improvement of the property and the completion of its extension and betterment."

In view of this situation, it was resolved, after a conference of all interested parties, to apply for receivers. The application was made by counsel for the Guaranty Trust Co. of New York.

Details of Frisco Reorganization.

According to a report from New York, J. & W. Seligman & Co., Speyer & Co., the Guaranty Trust Co. and Lee, Higginson & Co. have undertaken the formation of a syndicate to provide \$25,000,000 cash required for the reorganization plan of the St. Louis & San Francisco Railroad, a description of which appeared in the MANUFACTURERS RECORD last week. It is further stated that the fixed charges of the new company will be only \$9,158,189, as compared with present fixed charges of \$14,886,324, but there are contingent (although not fixed) charges upon the adjustment bonds and the income bonds, the latter being non-cumulative. Total charges, fixed and contingent, will be \$13,524,118.

Working on Important Railroad Plan.

Plans are still under consideration for the formation of a new railroad route from Paris, Tex., to New Orleans, which would necessitate considerable new construction, although it would include about 250 miles of lines already built. It is contemplated to link up the Paris & Mt. Pleasant Railroad, 51 miles long from Paris, southeast to Mt. Pleasant, Tex.; the Marshall & East Texas Railway, 92 miles long from Winnsboro, southeast to Gilmer, Marshall and Elysian Fields, Tex., and the New Iberia & Northern Railroad, 88 miles long from Port Barre, La., southward to New Iberia, Franklin and Shadyside, La., with several branches. One or two other small lines may be taken into the plan.

Among the new construction projected in connection with this idea are extensions of the New Iberia & Northern Railroad from Oaklawn to New Orleans, 93 miles, and from Port Barre northwest to the Sabine River on the Texas boundary, 107 miles, with branches to the

salt mines at Weeks and Avery Islands in Louisiana. This would leave a gap of about 75 miles to be built in Texas, probably via Hemphill, to reach the terminus of the Marshall & East Texas road. Apparently about 250 to 275 miles of new construction would be required to complete the plan, unless some other existing mileage is included.

A. T. Perkins, 401 Locust street, St. Louis, is president of the Marshall & East Texas line, and also of the New Iberia & Northern road. R. F. Scott of Paris, Tex., is president of the Paris & Mt. Pleasant Railway.

CONTRACT FOR GREAT COAL PIER.

Work Begins at Once on Baltimore & Ohio Railroad's \$1,500,000 Addition.

H. S. Kerbaugh, Inc., Munsey Building, Baltimore, and New York, has been awarded the contract for the construction of the new \$1,500,000 coal pier of the Baltimore & Ohio Railroad at Curtis Bay, Baltimore. This contract covers the superstructure and bulkhead; also the dredging, but the superstructure has been sublet to the Consolidated Engineering Co. of Baltimore. The Robbins Belt Co. of New York city will equip the pier with the coal-conveying machinery, and the car dumpers will be installed by the McMyler Interstate Company of Cleveland, O. The Surety Engineering Co. of New York will build the thawing shed, in which will be placed carloads of coal during cold weather before the fuel is dumped into the ships. Smith McCormick of Easton, Pa., will do the grading. The railroad company says that all work upon these contracts will begin immediately, and it is expected that the pier will be ready for use during the season of 1916.

As recently announced, this pier will have a capacity of 10,000,000 tons of coal a year, and will, it is said, be the largest of its type ever planned. It will embody many features wholly new. Ships may be loaded simultaneously on each side of the pier, or, if need be, the total capacity of the pier may be concentrated upon the loading of one vessel. The conveying machinery will prevent the breaking of coal when it is dumped into the holds of ships, this mechanism consisting of belts and movable towers working up and down along the pier at any point required. The pier will be 700 feet long and 115 feet wide, and of fireproof construction. It will be able to handle 40 cars of 100 tons capacity each per hour. The plans for it were prepared by Francis Lee Stuart, chief engineer of the railroad company.

An Alabama Company Will Issue \$1,000,000 of Bonds.

The Birmingham-Tuscaloosa Railway & Utilities Co. has changed its name to Tuscaloosa Railway & Utilities Co. and has reduced its capital stock by \$500,000 to \$3,000,000. It is also proposed to issue \$1,000,000 of first mortgage 6 per cent. 25-year gold bonds, with the Republic Trust Co. of Philadelphia as trustee. The company owns the street railway and the gas, heat and power plants at Tuscaloosa, Ala. Fred. S. Morris of Philadelphia is president.

Missouri, Kansas & Texas Report.

The annual report of the Missouri, Kansas & Texas Railway Co. for the year ended June 30, 1915, shows that the operating revenues for the twelvemonth were \$32,898,758, increase as compared with the previous year \$980,834; operating expenses \$22,967,591, decrease \$250,240; net operating revenues \$9,931,166, increase \$1,240,075; gross income \$10,146,001, increase \$1,237,630; net income after deductions \$1,474,985, increase \$935,758. Ratio of operating expenses to gross operating revenues 69.81 per cent.; last year it was 72.77 per cent.

Freight traffic revenues increased \$2,169,026, this growth, says President C. E. Schaff, being mainly due to increased shipments of grain, cotton and oil, as well as of miscellaneous freight. But the increase would have been much larger if the war had not so seriously affected business conditions in the Southwest, especially in Oklahoma and Texas, depressing the price of cotton and gravely impairing the purchasing power of the country. Thus trade was stagnated and progress ar-

rested for the time being. Slackness in business affected passenger earnings severely, and they show a decrease as compared with 1914 of more than \$1,000,000.

Heavier motive power of greater tractive capacity was a strong factor in the improvement of earnings, notwithstanding unfavorable business conditions. This addition consisted of 30 new type Mikado locomotives which were able to pull larger trains and assist in the reduction of operating expenses. Thus the average tractive power of engines on the system was increased 5 per cent., while the capacity of freight cars was increased 1.3 per cent. Yet the advancement in earnings would have been greater had not the company suffered from floods and washouts in the spring, these interrupting traffic movement and increasing operating costs.

\$60,000,000 BONDS SOLD.

Baltimore & Ohio Railroad Will Now Push Through Some Improvements.

The Baltimore & Ohio Railroad Co. has sold to Kuhn, Loeb & Co. and Speyer & Co. of New York \$60,000,000 of its 5 per cent. general mortgage bonds, this being the first issue made under the general and refunding mortgage of \$600,000,000. About \$40,000,000 of the proceeds will be used to take up that amount of short-term notes maturing in 1917 and 1918, but which may be paid off under an option. The remainder of the proceeds are to be employed for improvements now in progress or proposed. One of these is the new \$1,500,000 coal pier at Curtis Bay, Baltimore, the contract for which has just been let.

Another improvement which has been under consideration for several years, and which may now be completed, is the elevation of the main line tracks from Mount Winans to Locust Point at Baltimore. This part of the system carries the heavy export traffic of the system to its principal ocean terminals, and at present the tracks cross a number of streets at grade. It has long been desired to eliminate these crossings for considerations of both safety and speed. It is probable that some curvature will be taken out when the elevation of line is undertaken.

At other terminals on the system improvements and additions are also projected.

President Willard Re-Elected.

At a recent meeting of the directors of the Baltimore & Ohio Railroad Co., President Daniel Willard was re-elected for his seventh consecutive year as chief executive officer of the system. The vice-presidents were also re-elected thus: George F. Randolph, first; George M. Shriver, second; A. W. Thompson, third; J. V. McNeal, fourth and treasurer. Custis W. Woolford, secretary, and Hugh L. Bond, Jr., general counsel, were also re-elected. The board likewise re-elected Oscar G. Murray as its chairman.

New Equipment.

Pennsylvania Railroad has ordered 25 passenger cars and 7 combination passenger and baggage cars from the Pressed Steel Car Co., Pittsburgh.

Southern Railway is reported in the equipment market for locomotives and cars.

Tavares & Gulf Railroad will purchase 2 ten-wheel locomotives.

Nashville, Chattanooga & St. Louis Railway will build in its own shops 500 more box cars of 40 tons capacity, making the total number to be built there 1000. It will also construct 20 cabooses.

Georgia Southern & Florida Railway has placed its orders for equipment thus: Press Steel Car Co., Pittsburgh, 2 combination passenger and baggage cars; Lenoir Car Works, Lenoir City, Tenn., 130 steel drop-bottom 40-ton gondola coal cars and 375 steel under-frame ventilated 30-ton box cars.

Missouri, Kansas & Texas Railway is in the market for 500 more cars.

Chesapeake & Ohio Railway will buy 12 express cars and 6 all-steel passenger cars.

Chicago & Alton Railroad has ordered 150 gondola car bodies from the Haskell & Barker Car Co., Michigan City, Ind.

Kansas City Southern Railway contemplates purchasing 200 gondola car bodies.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Record of Week's Progress in Improvements in City and Country.

Details in regard to road and street undertakings and bond issues, briefly mentioned below, are given under the proper headings in our "Construction Department" and "New Securities," published elsewhere in this issue.

Bonds Voted.

Batesville, Tex.—Zavalla county, Road District No. 3, voted \$40,000 bonds to construct roads.
 Bolivar, Mo.—Polk county, Bolivar Special Road District, voted \$25,000 bonds for road improvements.
 Boston, Tex.—Bowie county voted \$20,000 bonds to build and extend roads in Precinct No. 1.
 Claremont, Okla.—Rogers County, Collinsville District, voted \$30,000 bonds and Verdigris District \$50,000 bonds for road construction.
 DeLand, Fla.—Volusia county, Special Halifax Road and Bridge Daytona District issued \$400,000 road and bridge bonds.
 Lexington, Mo.—Lafayette county, Waverly Special Road District voted \$49,000 bonds to construct rock road.

Bonds to Be Voted.

Galveston, Tex.—City will vote on \$875,000 bonds for street paving, etc.
 Lufkin, Tex.—Angelina county, Lufkin District, will vote on \$200,000 bonds to construct roads.
 Marshall, Mo.—Saline county will vote in January on \$1,310,000 bonds to rock total of 192.20 miles of roads.
 Sweetwater, Tex.—Nolan county votes December 18 on \$100,000 bonds to construct roads.
 Tallahassee, Fla.—City votes December 28 on \$4000 bonds for street paving.

Contracts Awarded.

Austin, Tex.—City awarded contract for 50,000 square yards bitulithic street paving.
 Chattanooga, Tenn.—City awarded \$5277 contract for street paving.
 Charleston, W. Va.—Kanawha county awarded \$36,855.72 contract for road construction.
 Clearwater, Fla.—City awarded \$22,806.72 contract for street improvements.
 Covington, La.—St. Tammany parish awarded contract for maintaining 175 miles of roadways and bridges.
 Dallas, Tex.—City awarded \$7550 paving contract.
 Dobson, N. C.—Surry county, Westfield township, awarded contract at \$25,000 for grading and topsoiling highways.
 Dothan, Ala.—Houston county awarded contract for road construction to cost \$100,000.
 Eagle Lake, Tex.—City awarded contract to gravel about 15,000 cubic yards of streets; \$12,500 available.
 Fellsmere, Fla.—City awarded contract to construct 3½ miles of concrete sidewalks.
 Fort Pierce, Fla.—St. Lucie county awarded contract for asphalt-surfacing 4½ miles of Dixie Highway.
 Gadsden, Ala.—Etowah county awarded contract for 11 miles of road.
 Greenwood, S. C.—City awarded contract to construct 100,000 square yards concrete and brick paving; \$175,000 available.
 Independence, Mo.—Jackson county awarded \$14,715 contract to pave 1 mile of road.
 Knoxville, Tenn.—Knox county awarded \$100,000 contracts for road construction.
 Leonardtown, Md.—St. Mary's county awarded contract to construct 1.18 miles of State-aid highway.
 Lexington, Ky.—Fayette county awarded contracts for about 5 miles of paving; estimated total cost \$6000 to \$7000 per mile.
 Livingston, Tex.—City awarded \$27,000 contract for street improvements; 7½ miles grading, etc.
 Monett, Mo.—City awarded \$6000 contract to construct oiled macadam paving.

Oakdale, La.—City awarded contract to construct 3 miles of cement sidewalk.

Springfield, Mo.—City awarded \$13,500 paving contract.

Contracts to Be Awarded.

Albany, Ky.—Clinton county will construct 22 miles of water-bound macadam road.
 Bay Minette, Ala.—Baldwin county receives bids until December 14 to grade, drain and surface with sand-clay 10 miles of road; expenditure \$11,158.52.
 Cleveland, Tenn.—City will pave streets; \$65,000 available.
 Dallas, Tex.—Dallas county received bids until November 29 to surface 2 miles of road with gravel.
 Knoxville, Tenn.—Knox county invites bids until December 15 for rebuilding two miles of highway.
 Lynchburg, Va.—City opened bids November 27 to construct granolithic sidewalks; 500 square yards sidewalks and 300 cubic yards excavation.
 Opelika, Ala.—Lee county receives bids until December 27 for road improvements; expenditure \$11,158.52.
 Osceola, Ark.—Mississippi county, Osceola and Little River Improvement District No. 1 will construct 29.5 miles of concrete road, etc.; \$250,000 available.
 Pine Bluff, Ark.—Road Improvement District No. 12 of Jefferson county will improve 19 miles of road.
 Snow Hill, N. C.—Greene county receives bids until December 6 to construct sand-clay roads to amount of \$32,500.

Important Governmental Experiment in Testing Road-Building Materials.

Washington, D. C., November 30.

There is at Washington a textbook in concrete, brick and stone—the road to Chevy Chase, built by the plans and under the direction of the Office of Public Roads of the United States and for the sole purpose of informing the public and the members of Congress interested in the improvement of the public highways upon the methods and cost of construction, types of roads, adaptability of material and economy of maintenance. Thousands of people travel over this road, which is built in many sections of different types, every day, and hundreds of practical road-builders from all parts of the country have inspected it from time to time and have marveled at the excellence of the work. Manufacturers who have supplied bituminous materials for the treatment of the road have detached their special experts for this service and the traffic over the road has demonstrated under carefully observed conditions the relative value of the several types of roadmaking up this great highway.

The Chevy Chase road is experimental. It consists of different types of pavement—bituminous macadam laid by the penetration method, surface treatments of waterbound macadam, asphaltic surfaces on concrete foundations, bituminous surfaced concrete, plain and oil cement concrete and vitrified brick, all of which are under daily observation by expert road-builders to ascertain which of the types is best suited to the traffic and which is condemned by practical test under the same conditions of climate, soil, rainfall, heat and cold and like traffic requirements. It would be just the same to the Office of Public Roads, which has written this open book in concrete, brick and stone, whether any part of it or all parts of it should fail, failure in materials used, in construction, in durability, in cost, in maintenance—the test is the thing.

Road-building is a science now, and efficiency is the only test of quality. In the stones used in the construction of the Chevy Chase road, their specific gravity, their weight per cubic foot, their water absorption, their percentage of wear, their hardness and toughness are all determined by the most careful scientific tests. Patrolmen are constantly employed on this road to keep account of whatever defects in materials and construction may develop and exact data as to the cost of maintenance. In one of the experiments covering 1581 square yards the cost per square yard for 2½-inch bituminous wearing surface was 46.18 cents. This experiment was made in 1911. For the maintenance of surface there was no expense in the two following years, but in 1914 this expense was \$79.70. On another section of the road the cost per square yard for 2½-inch bituminous wearing surface was 64.42 cents and for supplementary construction 13.20. This experiment covered an area of

705 square yards, and in the three years from 1912 to 1914, inclusive, there was no expense for maintenance. All surfaces on this road were built of a uniform thickness of eight inches and a total width of 19 feet. The base course was of stone ranging in size from one to three inches spread to a depth of five inches, the voids being filled with screenings. The wearing course consisted of stone ranging from one to two inches, generally, and upon this course the bitumen was applied in two applications of approximately 1½ to 1½ gallon, respectively. The cost of the stone used in the foundation and wearing courses varied according to the expense of quarrying and delivery, as it would vary at all other points, and of all the materials of construction and charges for maintenance exact account has been kept.

The Chevy Chase road was fortunately placed for the reason that all of its sections or types have been subjected to precisely the same sort of traffic year in and year out, and the section or type that has not stood the strain has been as important an object-lesson to road-builders as the section or type that has maintained itself under like strain. The road as a whole is a great experiment conducted by the most competent engineers to demonstrate the most practical things.

Concrete Road Builders' Conference.

The program for the Second National Conference on Concrete Road Building in Chicago, February 15 to 18, 1916, is being completed rapidly. Only two or three more speakers are to be named, after which copies of the program will be given wide distribution in advance of the conference.

Among the interesting addresses to be delivered will be one by Edward Hoopes of the Fidelity & Deposit Co. of Philadelphia. Mr. Hoopes has undertaken an exhaustive inquiry upon which to base his paper, and it promises to be of exceptional interest to road officials and contractors.

Following the successful plan adopted for the first conference, most of the program will be devoted to the consideration of committee reports. Seventeen committees are actively at work collecting information and data. A complete list of sub-committees, showing the topics with which each is to deal, is as follows:

DRAINAGE AND PREPARATION OF SUBGRADE:

Chairman, Hector J. Hughes, Chairman School of Engineering, Harvard University and Massachusetts Institute of Technology, Cambridge, Mass.
 Clinton Cowen, State Highway Commissioner, Columbus, O.
 George W. Cooley, State Engineer, Minnesota State Highway Commission, St. Paul, Minn.
 George A. Quinlan, County Superintendent of Highways, Chicago.
 Edward T. Beck, Edward T. Beck & Co., Contractors, Cuba, N. Y.

ECONOMICAL WIDTHS OF PAVEMENTS AND SHOULDERS:

Chairman, J. J. Cox, Instructor in Civil Engineering, University of Michigan, Ann Arbor, Mich.
 Wm. W. Marr, Chief State Highway Engineer, Springfield, Ill.
 Wm. A. Stinchcomb, County Surveyor, Cuyahoga County, Cleveland, O.
 A. J. Rockwood, Consulting Engineer and Contractor, Rochester, N. Y.

PROBLEMS OF DESIGN, THICKNESS, CROWN AND GRADE:

Chairman, Ira O. Baker, Professor of Civil Engineering, University of Illinois, Urbana, Ill.
 Thomas H. MacDonald, Highway Engineer, Iowa State Highway Commission, Ames, Iowa.
 H. L. Bowby, Executive Officer, Pacific Highway Association, Portland, Ore.
 Eugene W. Stern, Chief Engineer of Highways of Manhattan, New York, N. Y.
 R. C. Hunt, Contractor, Washington Court House, O.

AGGREGATES:

Chairman, D. A. Abrams, Instructor in Charge, Structural Materials Research Laboratory, Lewis Institute, Chicago, Ill.
 W. K. Hatt, Professor of Civil Engineering, Purdue University, Lafayette, Ind.
 Chas. F. Shoop, Assistant Professor of Experimental Engineering, University of Minnesota, Minneapolis, Minn.
 H. S. Mattamore, Assistant to First Deputy Commissioner, in Charge of Physical Testing, New York State Highway Commission, Albany, N. Y.
 A. S. Ren, Engineer of Tests, Ohio State Highway Department, Columbus, O.

HANDLING AND HAULING MATERIALS AND WATER SUPPLY:

Chairman, T. R. Agg, Professor in Charge of Highway Engineering, Iowa State College, Ames, Iowa.
H. G. Shirley, Chief Engineer, Maryland State Roads Commission, Baltimore, Md.
Edw. N. Hines, Chairman Board of County Road Commissioners, Wayne County, Detroit, Mich.
R. N. Wald, National Road Engineer, Ohio State Highway Department, Columbus, O.
E. H. Cowan, Vice-President the Farrell Engineering & Construction Co., Contractors, Cleveland, O.

ORGANIZATION OF CONCRETING CREW:

Chairman, H. P. Gillette, Editor-in-Chief Engineering and Contracting, Chicago, Ill.
E. I. Cantline, Chief Deputy State Engineer, Oregon State Highway Commission, Salem, Ore.
Wm. F. McVaugh, County Engineer, Madison County, Anderson, Ind.
Walter Buchler, Civil Engineer, Smithville, Minn.
O. T. Dunlap, Dunlap-Dippold Company, Contractor, Edw. W. Dunlap, Ill.

PROPORTIONS OF MATERIALS AND CONSISTENCY OF CONCRETE:

Chairman, W. S. Gearhart, Kansas State Engineer, Manhattan, Kans.
A. N. Talbot, Professor of Municipal and Sanitary Engineering, University of Illinois, Urbana, Ill.
W. M. Acheson, Division Engineer, New York State Highway Commission, Syracuse, N. Y.
H. S. Van Scoyoc, Chief Engineer, Toronto-Hamilton Highway Commission, East Toronto, Canada.
F. L. Rice, F. L. Rice & Sons, Contractors, Shelby, O.

MIXING AND PLACING CONCRETE:

Chairman, Ernest McCullough, Civil Engineer, Chicago, A. D. Williams, Chief Engineer, State Roads Commission of West Virginia, Morgantown, W. Va.
John Wilson, Civil Engineer, Duluth, Minn.
Ernest Ashton Chemical Engineer, Lehigh Portland Cement Co., Allentown, Pa.
G. E. Scott, Contractor, Norwalk, O.

REINFORCEMENT:

Chairman, Richard L. Humphrey, Consulting Engineer, Philadelphia, Pa.
Leonard S. Smith, Professor in Charge of Highway Engineering, University of Wisconsin, Madison, Wis.
J. S. McCullough, City Engineer, Fond du Lac, Wis.
Richard L. Saunders, Deputy Highway Commissioner of Connecticut, Hartford, Conn.
R. M. Hudson, Contractor, Atlanta, Ga.

JOINT LOCATION AND CONSTRUCTION:

Chairman, George A. Ricker, ex-First Deputy Commissioner, New York State Highway Commission, Albany, N. Y.
H. J. Kuelling, County Highway Commissioner, Milwaukee County, Milwaukee, Wis.
Fred C. Smith, Consulting Engineer, Philip Carey Company, Cincinnati, O.
E. D. Boyer, Engineer, the Atlas Portland Cement Co., New York, N. Y.
Austin W. Summers, Contractor, Buffalo, N. Y.

EXPANSION AND CONTRACTION:

Chairman, F. E. Turneaure, Dean, College of Mechanics and Engineering, University of Wisconsin, Madison, Wis.
Paul D. Sargent, Chief Engineer, State Highway Commission, Augusta, Maine.
Gaylord C. Cummin, City Manager, Jackson, Mich.
W. A. McIntyre, Chief Road Engineer, Association of American Portland Cement Manufacturers, Philadelphia, Pa.
Nelson Cunliff, Commissioner of Parks and Recreation, St. Louis, Mo.

FINISHING AND CURING:

Chairman, Charles Whiting Baker, Editor-in-Chief Engineering News, New York, N. Y.
W. A. McLean, Engineer of Highways, Department of Public Works of Ontario, Toronto, Ont.
H. M. Sharp, Deputy State Highway Commissioner, State Highway Department, Columbus, O.
Wm. M. Kinney, Inspecting Engineer, Universal Portland Cement Co., Chicago.
Howard W. Underwood, Field, Barker & Underwood, Contractors, Philadelphia, Pa.

CONSTRUCTION OF SHOULDERS AND CURBS:

Chairman, A. N. Johnson, Highway Engineer, Bureau of Municipal Research, New York, N. Y.
A. W. Dean, Chief Engineer, Massachusetts Highway Commission, Boston, Mass.
A. B. Fletcher, Highway Engineer, California Highway Commission, Sacramento, Cal.
Charles E. Russell, County Superintendent of Highways, Lake County, Waukegan, Ill.
Edward M. Laing, President Edward M. Laing Company, Contractors, Highland Park, Ill.

METHODS AND COST OF MAINTENANCE:

Chairman, A. H. Hinkle, Deputy Highway Commissioner, Ohio State Highway Department, Columbus, O.
L. C. Herrick, County Engineer, Norwalk, Huron county, Ohio.
John W. Mueller, Civil Engineer, New Castle, Ind.
Maurice Hoefken, Hoefken Bros. Supply and Construction Co., Contractors, Belleville, Ill.

FORM OF SPECIFICATIONS:

Chairman, A. R. Hirst, State Highway Engineer, Wisconsin Highway Commission, Madison, Wis.

F. F. Rogers, State Highway Commissioner, Michigan State Highway Department, Lansing, Mich.
C. B. Breed, Consulting Engineer, Boston, Mass.
F. P. Wilson, City Engineer, Mason City, Iowa.
R. D. Baker, the R. D. Baker Co., Contractor, Detroit, Mich.

COST OF CONSTRUCTION:

Chairman, C. J. Bennett, State Highway Commissioner of Connecticut, Hartford, Conn.
H. Eltinge Breed, First Deputy Commissioner, New York State Highway Commission, Albany, N. Y.
E. J. Mehren, Editor-in-Chief Engineering Record, New York, N. Y.
C. U. Boley, City Engineer, Sheboygan, Wis.
Frank A. Windes, Windes & Marsh, Contractors, Winnetka, Ill.

ESTIMATING AND INSPECTION PROBLEMS:

Chairman, A. Marston, Dean and Director, Division of Engineering, Iowa State College, Ames, Iowa.
John H. Mullen, Deputy State Engineer, Minnesota State Highway Commission, St. Paul, Minn.
K. H. Talbot, Division Engineer, Universal Portland Cement Co., Pittsburgh, Pa.
H. A. Johnston, Contractor, Kalamazoo, Mich.

PROGRAM OF SPEECHES.

National Rivers and Harbors Congress, Washington, D. C., December 8, 9 and 10.

Following is the program of speeches announced for the meeting of the National Rivers and Harbors Congress at Washington next week:

Opening Address—Hon. William S. Redfield, Secretary, Department of Commerce.

President's Annual Report and Address—U. S. Senator Jos. E. Ransdell, Louisiana.

"The Obstacles to Waterway and Port Development and Their Vital Interest to the Manufacturer and Wage-earner"—Edward F. McSweeney, Chairman, Directors of the Port of Boston.

"Congress and Our Seaboard Harbors"—R. A. C. Smith, Commissioner, Department of Docks and Ferries, New York City.

"Who Is Responsible for the Failure to Develop Our Waterways?"—Ex-Governor A. O. Eberhart, St. Paul, Minn., President, Mississippi Valley Terminal League.

"Rivers and Rails"—Paul W. Brown, Editor Daily Republic, St. Louis, Mo.

"The Missouri River"—U. S. Senator James A. Reed, Missouri.

"Interest of the West in Waterways"—U. S. Senator James D. Phelan, California.

"The Port of Los Angeles"—Congressman William D. Stephens, California.

"Mississippi River Improvements" (illustrated)—Congressman William E. Humphrey, Washington.

"The Port of New York"—Congressman William S. Bennett, New York.

Congressman J. E. Meeker, Missouri.

"Common-sense Preparedness"—Congressman J. Hampton Moore, Pennsylvania.

"The Lower Mississippi River" (illustrated with moving pictures)—Congressman Ben. G. Humphreys, Mississippi.

"The Illinois Waterway"—Governor Edward F. Dunne, Illinois.

"The Utilization of Western Rivers"—Col. C. McD. Townsend, President Mississippi River Commission.

"Chesapeake Bay and Its Tributaries"—Mayor James H. Preston, Baltimore.

"The Port of New Orleans"—Mayor Martin Behrman, New Orleans.

"Great Lakes Commerce as Affected by the Erie Canal"—Henry W. Hill, Buffalo, N. Y., President New York State Waterways Association.

"The Benefit of a Thorough System of Waterway Improvements"—Judge D. D. Woodmansee, Cincinnati, Ohio.

"Waterways for Health and Recreation" (illustrated with lantern slides)—Dr. C. S. Street, Philadelphia, Pa.

"The Motor Truck in General Transportation"—H. L. Whittemore of the Autocar Company, Ardmore, Pa.

"From Iron Ore to Finished Pipe" (illustrated with moving pictures)—C. F. Roland, New York City, Metallurgical Department, National Tube Company.

"The Argentine and Its Waterways" (illustrated with lantern slides)—A. E. Dillmont, Buenos Aires, Argentine.

"The Relation of Good Roads to Waterways" (illustrated with lantern slides)—Logan Waller Page, Washington, D. C., Director, Office of Public Roads.

"The War Against Waterways"—Ex-Congressman James H. Davidson, Oshkosh, Wis.

"Texas Harbors and Waterways"—Ex-Congressman Thomas H. Ball, Houston, Tex.

"The Northwestern Rate Situation and the Mississippi River as a Means of Relief"—Wilbur F. Decker, Minneapolis, Minn., President, Minneapolis Civic and Commerce Association.

"The Tennessee River"—C. W. Ashcraft, Florence, Ala.

"The Improved Port Facilities and Waterways of Louisiana"—Governor Luther E. Hall, Louisiana.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Additions to Franklinville Mill.

About 3000 spindles and 50 looms, additional to present equipment, will be installed by the Franklinville (N. C.) Manufacturing Co. This company is now erecting an additional building to provide for this installation of new equipment. It manufactures seamless bag cloth, chain warps, etc.

A 4000-Spindle Addition.

The Avondale Mills, Birmingham, will build (with own force) the company's recently-mentioned addition to Eva Jane Mills at Sylacauga, Ala. This building will be 168x132 feet, two stories high. It will be equipped with about 4000 spindles and preparatory machinery for spinning, winding and twisting coarse yarn. All the equipment has been purchased.

To Knit Men's Underwear.

One hundred dozen will be the daily capacity of a knitting mill, for men's heavy ribbed underwear, which the Robinson-McGill Manufacturing Co. (now manufacturing harness) will establish at Shelbyville, Tenn. A suitable building has been obtained and the company wants the necessary machinery for the output mentioned. The company will also need a superintendent for the mill.

Textile Notes.

B. H. Merck, Gainesville, Ga., has decided upon a daily capacity of 100 dozen pairs of hosiery for his knitting mill lately reported to be established.

Monarch Cotton Mills, Union, S. C., will add 11,000 spindles, 325 looms and accompanying machinery, in present buildings, in connection with increase of spindleage announced in November. J. E. Sirrine, Greenville, S. C., is the architect-engineer in charge.

Mississippi Cotton Mills Co., Moorhead, Miss., is reported as planning to build an additional mill for manufacturing tire duck.

Runnymede Mills No. 2, Tarboro, N. C., has increased capital stock from \$38,000 to \$50,000 to buy Wah Rea Hosiery Mills at Tarboro.

Southern Textile Co., McKenzie, Tenn., has been incorporated with \$10,000 capital stock by W. A. Young, V. C. Wrinkle, R. E. Moore and associates.

W. J. Berryman, Edenton, N. C., may establish a hosiery knitting mill. He wants to correspond with manufacturers of the necessary machinery and of hosiery yarns.

The Aycock Hosiery Mills, South Pittsburg, Tenn., will expend \$9000 on building and machinery to increase dyehouse facilities. This company will install dyeing machinery for American dyestuffs, the daily capacity to be 1200 dozen pairs of hosiery. It was lately mentioned as having awarded building contract (one story, 50x40 feet, brick) to V. W. Crumbliss.

The Lowell (Mass.) Bleachery contemplates early consideration by stockholders of its plan for a large permanent plant at St. Louis, where the company has a bleachery. An unconfirmed report states the company will invest \$200,000 to build a three-story-and-basement structure and equip it with machinery for a monthly capacity of 250,000 pounds of dyed and finished cloth.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

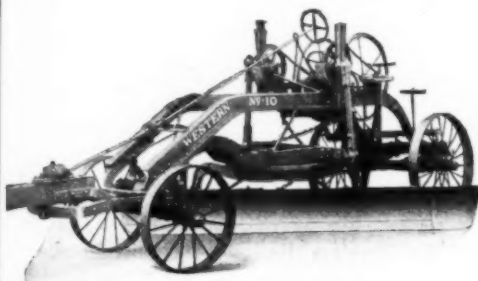
New Western Road Machinery.

Cities, counties and road contractors for several years have been purchasing high-power traction engines capable of handling road-making machines of much greater capacity than are ordinarily to be found in service. Under these conditions nothing can be clearer to the practical road builder than that in order to reach a maximum degree of economy in road construction and maintenance the machinery employed must be equal in capacity to the tractor used. To meet this demand in maintenance equipment, the Western Wheeled Scraper Co. of Aurora, Ill., has developed during the past year a combined scarifier, planer and roller, known as the Western road planer and finisher. This machine is said to be able, at one trip over, to resurface the entire roadway from ditch to ditch, leaving a uniformly crowned grade with a smoothly rolled, compact and practically perfect center.

The planer and finisher is equipped with a scarifier, blades or scraper bars made up in jointed sections, and a roller attachment having the face of the rolls so shaped that the center of the roadway is rolled and uniformly crowned.

Ten-inch I-beams, thoroughly braced and tied together, form the main frame, which is mounted on four wide-tired wheels. The back wheels have a diameter of 48 inches and the front wheels 24 inches, producing a "cut-under" front truck, allowing the machine to be turned in its own length.

Two forward mold boards, each 8 feet 6 inches long,



WESTERN NO. 10 ROAD GRADER.

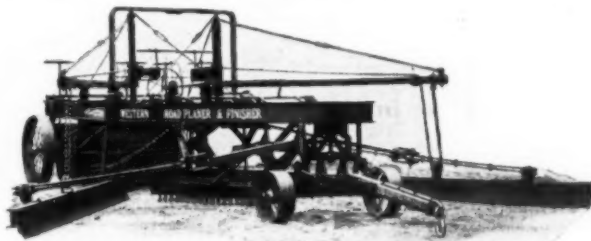
fitted with share, and a rear mold board 7 feet long, fitted with share, all securely bolted to a heavy 7-inch I-beam, compose the 24-foot long scraper bars or blades. Each blade is made in three sections, the rear sections being hinged together, and each section is fitted with a detachable share or cutting edge, the same as the ordinary road machine blade. They are constructed so that the cutting angle can be changed while the machine is in operation.

The scarifier is a supplementary leveler, and is claimed to be a most effective means for cutting off "humps" in the center of the road or street. It is made of structural steel throughout, while the teeth or diggers are of the best tool steel. It is pulled by a direct draft to the king bolt, and operates independently of the blades and roller, but works in conjunction therewith. The scarifier is automatically set to cut any desired depth. The roller frame is also made of structural steel, and supports six 42-inch rollers, each having a face of 12 inches, which are carried on and turned upon a solid steel axle 3 inches in diameter. Rear and roller axle of the machine are set in parallel, longitudinal positions, preventing crowding or binding of the rolls when making a short turn. As the tractor wheels travel outside of the 6-foot space provided by the six rolls, it is seen that the total width of the space effectively rolled varies from 9 to 12 feet, depending on the width of the tractor wheels. The leverage is of the worm-gear type throughout, and is self-locking.

Control of blades or scraper bars is through a chain fastened to the forward end of each blade, one end of the chain being wrapped around a swinging drum attached to a swinging crane arm by worm and hand-

wheel. With this construction the chain and drum are self-aligning, so that the chain always wraps evenly on the drum. The forward end of the blades operate on the "floating" principle; they take to the earth by "gravitation" only, but are firmly held from cutting too deeply, and can be adjusted to cut at any elevation desired. The middle and rear blade sections are controlled by a positive leverage, by which is meant that they can be set to cut any desired depth, and are rigidly held in that position by powerful worm levers. The rear ends of the rear blade sections are rigidly tied together, and are under the direct control of a powerful lever conveniently located on the operator's platform. As this portion of the blades spreads the earth only (the scarifier which precedes them having done what cutting is necessary at the center of the grade) and smooth up the center, it will be seen that they can be raised and lowered together and more uniform work done than though each were controlled by a separate lever.

The supplementary leveler, hinged to the rear end of the blades or scraper bars, prevents leaving a sharp ridge at the center of the grade by reason of the blades bringing to the center more earth than should have



WESTERN ROAD PLANER AND FINISHER.

been deposited there. This leveler is controlled by a lever within easy reach of the operator.

Another recent product of the Western Wheeled Scraper Co. is the new Western No. 10 road grader, which is constructed along powerful lines and is considered unbreakable by the maker. The grader is of composite design, and is claimed to embody all necessary or desirable features found on this type of machine, together with exclusive improvements. Heavy Z bars are used on the main frame, which is riveted together to eliminate lost motion resulting from loose parts and making certain a smooth, even cut.

The one blade employed is not rigidly attached to the blade beam, but has a lateral adjustment of 22 inches in either direction. This adjustment is automatic, and controlled by the position of the stay chains. This feature brings the cutting point in a more direct line with the draft and relieves the machine of the tremendous leverage or strain. Furthermore, this auto-

matic side shift places the blade in such position that its entire length is utilized, making the capacity of this machine with a 10-foot blade equal to machines having 12-foot blades.

An 18-inch expansion is provided for each end of the blade. This is a special shape for cutting new or cleaning out old ditches, undermining embankments or filling in old ditches. With this attachment the machine, it is claimed, will cut outside of the wheels a maximum of four feet.

Blade-lifting mechanism is ingenious and effective. A roller-bearing chain is used in connection with sprocket, rack and pinion, providing a most powerful lifting device and very rapid.

Other points include direct draft, wheels with concave tires and dustproof hubs, and a rear axle that is both pivotal and extensible, with a powerful offset hitch operated from the rear.

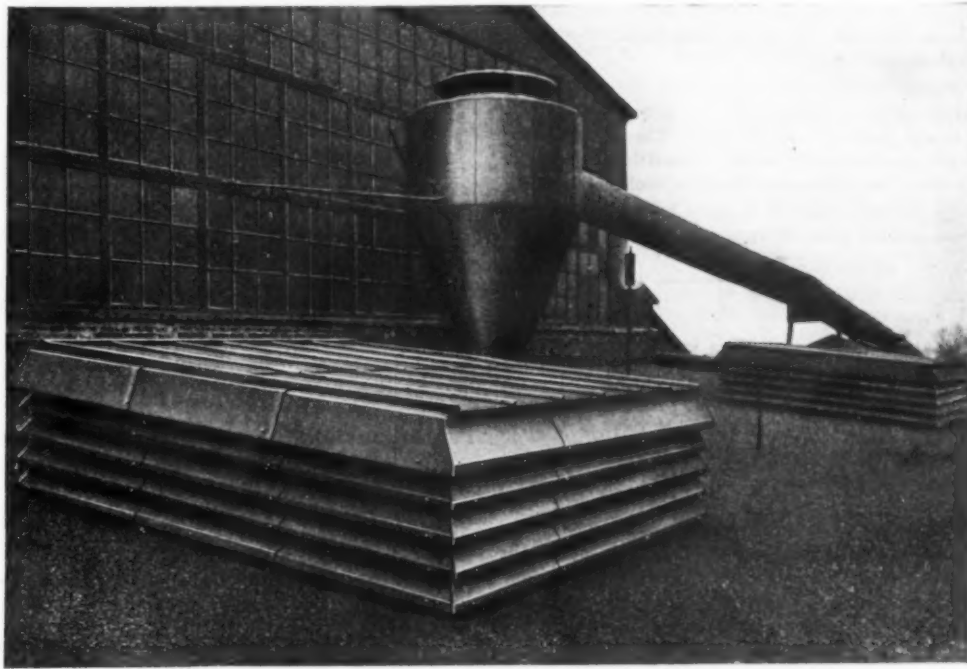
Waugh Glazing Construction.

Scientific principles and thorough methods which have marked the development of asbestos protected metal products, manufactured by the Asbestos Protected Metal Co. of Pittsburgh, Pa., are said to be embodied in the "Waugh" glazing construction, which is claimed to be practically a perfect solution of roof-lighting problems. Asbestos protected metal glazed structures are asserted to be safe against deflection, positively water excluding and corrosion proof under all conditions of service.

Distinguished features of the Waugh design comprise a rolled steel bar beam, stiff enough to carry its load without deflection, with a protective coating against corrosion; an asbestos protected metal gutter to take care of condensation; an asphaltic cushion, providing a non-absorbent, resilient and insulating bed for glass; asphaltic cap filler, which is claimed to positively exclude water; spring tension, locking cap to protect filler and a cap bolt for clamping the glass between the flexible cushion and filler, to insure waterproof joints.

The maximum deflection of Waugh bars is said to be never such that glass breakage results from structural weakness, and the protective coating makes the bars rustproof. Properties and applications of the coating are reviewed briefly in the following extract taken from a recent catalogue issued by the company:

"To begin with, the steel is freed from grease, moisture, oxides and every other surface impurity. To protect the steel from corrosive agents it is heated to a definite and uniform temperature, then it is immersed in a bath of special asphaltic compound, which covers it with a water and gas-proof coating that effectively seals it. Long experience has demonstrated that, when properly applied, asphalt furnishes a perfect protection for steel



SHOP BUILDINGS OF THE SOUTHERN RAILWAY CO., SHOWING ASBESTOS PROTECTED METAL BARS AND LOUVRES IN AN ARRANGEMENT TO GIVE ADEQUATE LIGHTING AND VENTILATION OF A PERMANENT CHARACTER UNDER SEVERE EXPOSURE TO SULPHUROUS GASES AND MOISTURE.

against corrosion, so long as the asphalt itself remains intact.

"To maintain the beneficial properties of this special asphaltic material, it is protected against the action of light, heat, solvents and mechanical abrasion by a tough, opaque and insulating covering of pure asbestos felt, applied to all surfaces of the bar and firmly pressed into the asphalt while it is soft and hot, thus permanently binding the two substances together.

"Finally, the asbestos is itself protected by a coating of special fume and moisture-proof hardening material, the nature of which depends upon the particular service to be rendered. We vary this surface treatment to withstand different chemical fumes. The protection afforded by the coating process is perfect and permanent under any conditions that are encountered in practice; neither acids nor salts can affect this coating. It is heat and fire-resisting, therefore minimizes condensation, reduces the effect of fire upon the steel and also retards and reduces temperature changes in the steel and therewith expansion and contraction. It is also an electrical insulator, and effectively protects the steel from stray currents and galvanic action.

"This protective coating has about the same thickness as 3½-pound sheet lead, and in comparison with lead weighs nothing at all. It is better than lead, because it is lighter and cheaper, is not affected by alkalies and is never porous, nor does it become porous. It is better than copper, because it is likewise lighter and cheaper and is not affected by any acid fumes. This coating is unaffected after years' exposure in a factory where copper downspouts were reduced to powder and blown away by the wind in less than two years."

In the Waugh system of construction gutters are provided for condensation sometimes found when a single thickness of glass is used. The gutters fit over the top of the bars and serve as anchors for the bolts by means of which the glass is held in place. Copper or galvanized iron or steel may be used for this purpose, but the company recommends asbestos protected metal, as it is said to be non-corrosive and permanent under all conditions.

A broad, continuous cushion of asphaltic compound supports the glass and prevents its contact with hard substances. Outer edges of the glass plates and the joints between them are covered and bridges with the half-oval section of asphaltic compound made for the purpose. Because of its resilient and plastic character, the filler is claimed to enter all depressions, making a perfect sealed contact with the wavy glass surface.

Caps, made of any suitable sheet metal, but preferably, as in the case of the condensation gutters, of asbestos protected metal, serve as a protection against the elements for the cap filler. Special shaped bolts, nuts and washers, made of non-corrosive material, extend upward from the bar, about 12 inches apart, through the condensation gutter, the cushion, the cap filler and the cap, binding the whole construction firmly in place.

Glazing methods as described in the foregoing, though pertaining to skylight work, are suited to monitors, sawtooth fronts or plain windows. The Waugh system of glazing construction is said to be particularly efficient wherever the atmosphere contains such actively corrosive elements as are to be found in paper mills, foundries, chemical factories, textile mills, dyehouses, etc.

Feldspar and Mica in Virginia.

J. SHIRLEY SMITH, Ridgeway, Henry Co., Va.

We have opened up and developed veins of feldspar which assays 16 per cent. potash, vein 30 to 150 feet wide, running many miles in length. This is the greatest feldspar belt known in the South. It is now contemplated that a mill to grind these minerals will be located in this section along the Norfolk & Western Railway within the near future, as a Northern syndicate has already taken up and secured many hundred acres of land here containing feldspar and mica. The writer has in the last three months opened what is said to be the richest electrical and scrap mica mine known in Virginia or North Carolina. Two men are taking out from one to two tons of this mica daily, and are shipping it to Richmond, Va., by the earload.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Potassium, Sodium, Salicylic Acid, Etc.

C. J. Lindemann, 600 Seaboard Bank Building, Norfolk, Va.:

"The writer has been requested by a Danish business man in Copenhagen, Denmark, to bring him in touch with American manufacturers or wholesale dealers in the following articles: Bromides of potassium and sodium, also other bromides; salicylic acid and carbolic acid; tin and tinned lead tubes (for cosmetics, tooth paste, etc.) The party referred to intends, if satisfactory prices can be obtained, to import a considerable quantity of these and probably other articles to the Scandinavian countries via Scandinavian-American Line, New York-Copenhagen."

Cereal for Dutch West Indies.

Abram De Sola, P. O. Box 95, Curacao, Dutch West Indies: "Do you know any cornmeal factory which wants to make their brand known in this place, as also in neighboring markets? In this place Quaker Oats have captured the market and their exportation is, more or less, 3000 to 4000 bags monthly."

Wants Factory Turret Clock.

Jayme Arthur Marques, Engenheiro Travessa do Caes do Tojo, 10 a 18 Conde Barao, Lisboa, Portugal:

"I am in the market at present for a turret clock for a factory, having two dials and a good sounding bell, so that it may be heard at some distance when striking the hours. Dials to be about three feet in diameter. Engraving in duplicate, best net prices f. a. s. New York city, weight and time of delivery. Kindly send this inquiry to suitable firms and let them write direct to me."

Wants Women's Clothing.

Albert Harman Company, manufacturer cycle and motor materials, tools, hardware sundries, 26 Hamilton Road, Highbury, London, England:

"We shall be glad to receive price offers and agency terms for ladies' and girls' gloves, stockings, underwear, dresses, etc., with a view to representing U. S. A. manufacturers in this country."

Railroad President Elected.

H. D. Pollard of Savannah has been elected president of the Wrightsville & Tennille Railroad of Tennille, Ga. He is also valuation agent of the Central of Georgia Railroad. A report from Macon says that the former president, A. F. Daley, died suddenly.

Permanent Home for Southern Textile Exposition.

[Special Dispatch to Manufacturers Record.]

Greenville, S. C., November 30.

The executive committee of the Southern Textile Exposition has decided to build a permanent home for the biennial show to cost \$50,000.

The capital stock of the corporation will be \$50,000, half of which will be subscribed in Greenville. Members of the Southern Textile Association and exhibitors will subscribe to the rest. J. E. Serrine, Greenville, has prepared tentative plans.

ROY G. BOOKER.

MINING

For Daily Output of 1500 Tons.

The development of 1500 acres of land for a daily output of 1500 tons of coal is the plan of the Peerless Block Coal Co., offices at Bramwell, W. Va. This company has organized, and its properties are around Harard, Ky. It wants prices on mining machinery, electrical equipment, tippie installation, power plant, mine cars, building materials, steel rails, etc., Jairus Collins, manager, at Bramwell, to be addressed. Officers are as follows: Jas. Ellwood Jones, president, Switchback, W. Va.; Justus Collins, vice-president, Cincinnati, O.; Chas. W. Freeman, secretary; Jairus Collins, treasurer-manager, both of Bramwell, W. Va.

Mineral Production Over \$2,000,000,000.

The value of the mineral production of the United States in 1914, according to the United States Geological Survey, was \$2,114,946,024, being exceeded only by that of two years—1913 and 1912.

The metallic products in 1914 were valued at \$691,000,343 and the non-metallic products at \$1,423,395,681.

To Mine Silica Sand.

A daily output of 800 tons of silica sand is proposed by the American Silica Sand & Mining Co., Herculaneum, Mo. This company is capitalized at \$15,000, and will install tramway, crushers, air compressors, boilers, etc. It has organized with the following officers: Geo. D. De Buchananne, president and manager; H. D. Evans, vice-president; J. B. De Buchananne, secretary-treasurer. Prices are wanted on boilers and air compressors.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

To Develop Mississippi Timber Land.

Several thousand acres of virgin long-leaf yellow-pine timber land near Hillsdale, Miss., have been purchased by the Southern Lumber & Timber Co. of Lumberton, Miss. About \$35,000 will be invested for mill and equipment improvements to increase capacity for cutting the timber at an established plant. The Filer & Stowell Company, Milwaukee, will furnish the machinery, while contracts for locomotives have been awarded to the Heisler Locomotive Works, Erie, Pa., and for log cars to the Kilby Locomotive & Machine Co., Anniston, Ala. It is stated that \$260,000 was the purchase price of the timber land.

Shook Plant Costing \$70,000.

One hundred thousand feet of box shoos will be the daily capacity of the plant which the Surry Lumber Co. of Baltimore will build to replace its burned mill at Dendron, Va. The building will be of mill construction, 200x100 feet, costing \$30,000, while the machinery will cost from \$40,000 to \$50,000. This equipment has been purchased.

Plans for Big Lumber Mill.

Final plans are being considered for the construction of a big mill to replace the recently burned plant of the Letcher & Moore Lumber Co., Orange, Tex. Specifications are being prepared for buildings and equipment of machinery to have a capacity of from 200,000 to 250,000 feet of lumber in 10 hours. The equipment will include the monorail system electrically operated, the 10-hour capacity to be 400,000 feet of lumber conveyed to ships at the wharf.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Birmingham.—Jefferson County Board of Revenue contemplates constructing bridge over Valley Creek between Rock Creek and Oak Grove; instructed County engr. to locate structure and estimate cost.

Ark., Osceola.—Mississippi County Osceola and Little River Road Improvement Dist. No. 1 will construct 9 steel bridges; receive bids until Dec. 1; Pride & Fairley, Engrs., Osceola. (See Road and Street Work.)

Fla., Arcadia.—De Soto county contemplates voting on \$46,000 bridge and road bonds. Address County Commrs.

Fla., De Land.—Volusia county, Special Halifax Road and Bridge Daytona Dist., issued \$400,000 bonds for bridge and road construction; S. D. Jordan, Clerk County Commissioners.

Ky., Franklin.—Simpson County Commrs. will construct bridge over Drake's Creek on Black Jack Rd.; cost \$2500.

N. C., Kinston.—City contemplates rebuilding bridge over Neuse River at foot of Cassell St. Address The Mayor.

Okla., Oklahoma City.—Oklahoma county will construct 2 bridges; County Commrs., M. Cornelius, Clerk, receive bids until Dec. 7; W. J. Peshek, Deputy. (See Machinery Wanted—Bridge Construction.)

Tex., Livingston.—City will construct 7 concrete and steel bridges and 2000 ft. corrugated-iron culverts; let contract J. G. Browne Company of Houston. (See Road and Street Work.)

Tex., Livingstone.—Comms.' Courts, Polk and Angelina counties, contemplate erection of bridge across Neches River at Clark's Ferry crossing. Address Polk County Commrs., Livingstone.

Tex., Robstown.—Drainage Dist. No. 2, Neuses county (L. T. Messer and others, Commrs.), will build bridges and culverts; bids until Dec. 6. (See Drainage Systems. See Machinery Wanted—Drainage; Bridges and Culverts.)

Va., Hanover.—Hanover County Commrs. will construct reinforced concrete bridge over Little River, 3 mi. from Beaver Dam; 124 ft. long, exclusive of approaches.

CANNING AND PACKING PLANTS

Ga., Barnett.—Southeastern Cattle Co. Incptd. by R. A. Cason of Atlanta, Ga., and others; plans to build packing plant (See Miscellaneous Enterprises.)

Ky., Louisville.—C. F. Vissman & Co., will build packing plant; 2 stories; brick; estimated cost, \$10,000; has plans by Chicago architects.

Va., Lewisetta.—Lewisetta Packing Co., capital \$50,000, Incptd.; A. B. Garner, Pres.; T. W. Marsh, Secy.

CLAYWORKING PLANTS

Ark., Hope.—Bricks.—Hope Brick Works plans to install brick kiln.

La., Covington.—Crockery.—St. Tammany Oil & Mineral Co., L. R. Sassnot, Pres., New Orleans, will build crockery factory.

Miss., Hattiesburg.—Brick, etc.—Dixie Gravel Co., I. V. Austin, Pres., plans to manufacture brick, tiling, etc. (See Mining.)

COAL MINES AND COKE OVENS

Ky., Hazard.—Peerless Block Coal Co. organized with offices at Bramwell, W. Va.; Jas. Ellwood Jones, Pres., Switchback, W. Va.; Justus Collins, V.-P., Cincinnati, O.; Chas. W. Freeman, Secy.; Jairus Collins, Treas.-Mgr.; both of Bramwell; A. A. Gallagher, Constr. Engr., Hazard; will develop 1500 acres coal land; daily output of mines, 1500 tons coal; will install mining machinery, electrical equipment, power plant, tipple, etc.; Javrus Collins lately mentioned to have leased land for development. (See Machinery Wanted—Mining Equipment, etc.)

Ky., Kona.—Elkhorn Coal Co., S. L. Bastin of Lexington, Ky., Mgr., will open additional mine and double output of coal.

Ky., Lothair.—Kentucky-Jewel Coal Co., also Kentucky Block Coal Co., H. E. Bullock, Pres. and Gen. Mgr., Hazard, Ky., will open new mine, to be shipping about Jan. 1; capacity about 400 tons daily; developing 400-acre tract; all machinery purchased. (Both companies previously noted.)

Ky., Roxana.—Geo. Reedy and associates will develop coal land.

Ky., Roxana.—Geo. Reedy and others reported to lease and develop coal lands on George Hogg coal tract.

Ky., Sergeant.—South East Coal Co., Seco, Ky., will develop additional coal property between Sergeant and Craftsville; will build mining town; has begun preliminary engineering.

Ky., Whitesburg.—Mineral Development Co., Philadelphia, Pa., is reported as to develop coal property on Colly Creek.

Mo., Lamar.—Arcadia Coal & Mining Co., capital \$40,000, Incptd. by Logan River, Walter Webb and D. B. Houston.

Tenn., Alton Park.—Chattanooga Gas & Coal Products Co., Chattanooga, is reported planning to double plant, increasing investment from about \$500,000 to \$1,000,000.

W. Va., Clay County.—Hartland Colliery Co., capital \$500,000, Incptd. by John B. Hart, Edward Hart and W. S. Booth of Clarksburg, Marcy McD. Price of New York and David Price of Johnstown, Pa.

W. Va., Fairmont.—Stafford Coal Co., capital \$3000, Incptd. by Clement L. Shaver, W. Ridney Reed and others.

W. Va., Foley.—Stallings Coal Co. (lately noted Incptd., capital \$5000) organized; F. N. Ryan, Pres.; K. L. Fink, V.-P. and Mgr.; L. C. Justice, Secy.-Treas.; will develop 50 acres; capacity not known; constructing powerhouse.

W. Va., Huntington.—New Rex Coal & Coke Co., capital \$100,000, Incptd. by L. R. Reese, J. W. Lawton, P. P. Gibson and others.

W. Va., Logan.—Wilson Coal Co. will build coal tipple to cost \$15,000 to \$20,000.

W. Va., Omar.—Main Island Creek Coal Co. will install electrical equipment at coal mines.

W. Va., War.—Williamson Coal & Coke Co. will install electrical equipment at coal mines; estimated cost \$5000 to \$6000.

W. Va., War.—Yukon Coal Co. will install electrical equipment at coal mines; estimated cost \$5000 to \$6000.

W. Va., War.—Warrior Coal Co. will install electrical equipment at coal mines; estimated cost \$5000 to \$6000.

W. Va., War.—Elk Horn Coal & Coke Co. will install electrical plant at coal mines to cost about \$3000.

W. Va., Yukon.—Pocahontas Domestic Coal Co. (W. H. Warner & Co., Cleveland, O.), War, W. Va., developing new plant at Yukon; has purchased steel tipple and electrical equipment.

CONCRETE AND CEMENT PLANTS

Ark., Foreman.—Portland Cement, etc.—Consumers' Portland Cement Co. organized; Prest., Albert Graff, Pres. of Albert Graff Concrete Construction Co.; V.-P. and Treas., Edgar S. Bell; Secy., Dilno D. Johnston; offices at 1406 Lumber Exchange Bldg., Chicago; awarded contract Fuller Engineering Co., Allentown, Pa., and 30 Church St., New York, to construct and equip plant; electrically driven throughout with individual electric motors; fireproof buildings; 24 hours' capacity, 2000 bls. Portland cement; will also manufacture hydrated lime and fertilizer lime. (Lately noted organized, letting contract for construction, etc.)

Va., Petersburg.—Concrete Blocks.—Glaucus A. Bryant, 229 Sycamore St., McIlwaine Bldg., plans organization of company to manufacture concrete blocks. (See Machinery Wanted—Concrete-block Machine, etc.)

COTTON COMPRESSES AND GINS

Tex., Lovelady.—Lang Smith will rebuild cotton compress noted in Oct. wrecked by explosion; install oil engine about 100 H. P. or 80 H. P. return tubular boiler; open machinery bids May 1; daily capacity gin 60 bales. (See Machinery Wanted—Engine (Oil); Boiler.)

Tex., Tuleta.—Tuleta Mercantile Co. will build 4-stand 70-saw cotton gin, and in connection will have large corn sheller and shucker, baler and grinder for chops and meal for domestic purposes and for feed; boiler and engine for power. (See Machinery Wanted—Cotton Gins, etc.; Corn Shuckers, etc.; Baler; Grinder, etc.)

Tex., Victoria.—Victorian Compress Co., lately noted to double platform capacity, is increasing wharfage room to 15,000 bales; also making other improvements.

COTTONSEED-OIL MILLS

Ga., Eastman.—Trio Cotton Oil Co. will rebuild cottonseed oil mill reported burned at estimated loss of \$215,000.

Okla., McAlester.—A. C. Murray of Clarksburg, Tenn., will install equipment to manufacture cottonseed-oil products. (See Ice and Cold-Storage Plants.)

DRAINAGE SYSTEMS

Ark., Osceola.—Comms. Drainage Dist. No. 16, Mississippi County Courthouse, let contract Clyde A. Walk, National Bank Bldg., LaGrange, Ind., for 2,749,925 cu. yds. excavation for drainage system; Engrs., Pride & Fairley, Osceola. (Call for bids lately noted.)

Ark., Marion.—Comms. Crittenden County Drainage Dist. No. 7, H. F. Wallis, Chrmn., Turrell, Ark., will construct system to drain 37,100 acres; requires 41 mi. of canals, involving 1,800,000 cu. yds. earth excavation; bids until Dec. 10; excavation divided into 4 parts, each offered separately to bidders; bids may also be accepted for entire work rough levees with crowns at least 4 ft. wide at certain locations. Contract No. 1 calls for 14.3 mi. of ditch; total yardage 404,900; estimated cost \$32,400; width of base of ditches, 12 ft.; average cut for greater portion, 8 ft. Contract No. 2—14.2 mi. of ditch; 402,500 cu. yds. excavation; estimated cost, \$32,190; width of base, 12 ft.; 2.7 mi. have average cut of 9.5 ft. Contract No. 3—12.1 mi. ditch; 479,600 cu. yds. excavation; estimated cost, \$38,370; 1½ mi. of ditch to have 20-ft. base and average cut of 12 ft.; remainder to have 12-ft. base; average cut for greater portion, 8 ft. Contract No. 4—3-mi. ditch; 44 ft. base; average cut, 13 ft.; 434,700 cu. yds. excavation; estimated cost, \$37,740. Morgan Engineering Co., Engr., 608 Goodwyn Institute Bldg., Memphis, Tenn. (Calls for bids lately noted.)

Fla., Largo.—Comms. Lake Largo-Cross Bayou Drainage Dist. will soon let contract to construct drainage system; issued \$120,000 bonds.

Fla., Tallahassee.—Everglades Drainage Dist. let contract Savannah Engineering & Construction Co., Savannah, Ga., at about \$120,000 to construct 3 locks and 1 dam.

La., Pointe a la Hache.—Plaquemines Parish Police Jury created Burbridge Drainage Dist.; appointed M. C. Baker, F. P. Morrill and S. M. Newton as Commrs.

N. C., Swann Quarter.—Southern Land Reclamation Co. increased capital from \$150,000 to \$300,000 and changed name to New Holland Farms.

S. C., Anderson.—Drainage Com. Rocky Creek Drainage Dist. No. 1 of Anderson county (Z. C. Ballentine, R. S. Ligon and J. J. Fretwell) let contract L. O. White of Statesville, N. C., to dredge Rocky River about 10 mi.; about 231,000 cu. yds. excavation; district comprises 800 acres; \$19,500 bonds voted. (Noted in August.)

Tex., Robstown.—Drainage Dist. No. 2, Neuses county (L. T. Messer, E. A. Baker and C. C. Brendle, Commrs.), receives bids until Dec. 6 to excavate ditches and build bridges and culverts; noted in July to expend \$158,000 for drainage system for 95,000 acres farm lands. (See Machinery Wanted.)

ELECTRIC PLANTS

Ala., Georgiana.—McGowin-Bennett Milling Co., W. M. McGowin, Pres., and J. R. Bennett, Secy., will establish electric plant; installation in feed mill plant; 3 mi. transmission; develop 100 H. P.; cost \$10,000; open construction bids Apr. 1; J. H. Berry, Contr. (See Machinery Wanted—Electric-plant Equipment.)

Ark., Booneville.—Booneville Light & Power Co., capital \$50,000, Incptd.; C. S. Greenway, Pres.; Robin Harvey, V.-P.; R. M. Harvey, Secy.-Treas.

D. C., Washington.—Potomac Electric Power Co., 14th and C Sts. N. W., secured permit to erect 2-story brick shop on 14th St.; estimated cost \$3500; Milburn, Heister & Co., Archts., Union Savings Bank Bldg., Washington; Jas. L. Marshall, Contr., 700 10th St. N. W., Washington.

Ky., Carlisle.—Carlisle Electric & Power Co. increased capital stock from \$15,000 to \$30,000; will build and equip ice factory.

Ky., Mater.—Wiley W. Gibson will construct electric-light system; E. A. Lassiter

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

of Mater is engineer in charge. (See Ky., Whitesburg.)

Ky., Mt. Olivet.—Dr. Chandler is reported as contemplating construction of electric-light system.

Ky., Louisville.—D. H. Ewing's Sons will install 22 motors aggregating 110 H. P.; will probably purchase engine and generator, using its own steam plant. (See Miscellaneous Enterprises.)

Ky., Whitesburg.—Wiley W. Gibson of Mater, Ky., will build power station in Whitesburg and electric-light system in Mater; equipment will consist of 110-volt or 125-volt direct-current generator and single switchboard with circuit breaker for above; 6000 ft. No. 4 insulated wire and about 5000 lamps of 16 C. P.; E. A. Lassiter of Mater is engineer in charge. (Lately noted.)

Miss., Forest.—Blenville Lumber Co. takes over Forest Electric Plant (not from municipal authorities, as lately stated) from R. J. Knoblock, Propr.; Mr. Knoblock remains manager; plant and mill to be operated by same power; 80 H. P. development; all equipment purchased; plant to be installed adjoining steel and concrete boiler-house, now being built for the company by W. R. Neislar.

Mo., Branson.—City contemplates granting franchise to C. C. Bradshaw of Fontenac, Kans., for electric-light plant.

Mo., Clearmont.—Jesse Baker will install small electric plant at repair shop; proposes to furnish electricity to light several buildings.

Mo., Springfield.—City votes Jan. 11 on \$80,000 bonds to build electric-light plant. Address The Mayor. (Noted in Oct.)

N. C., Granite Falls.—City engaged Comstock Electric Co., High Point, N. C., to prepare plans and specifications and install lighting system. (Noted in September.)

N. C., Zebulon.—City engaged Comstock Electric Co., High Point, N. C., to prepare plans and specifications for lighting system.

Okla., Heavener.—City, H. S. Bliss, Prest. Board Trustees, will construct electric-light plant; cost \$20,000; bonds lately noted voted; about 2 mi. transmission; develop about 150 H. P.; construction bids opened Nov. 28. (See Machinery Wanted—Electric Light Plant Equipment.)

Okla., Ringling.—Bert Foster of Ardmore, Okla., will construct electric-light system in connection with ice and cold-storage plant.

S. C., Greenville.—City will accept proposition submitted by Southern Public Utilities Co. to install white-way system, consisting of 84 lights, from Ottaray Hotel to American Bank.

S. C., Hartsville.—Coker College let contract Perry-Mann Electric Co. of Columbia, S. C., to install electric generating plant. (See Miscellaneous Construction.)

Tex., Atlanta.—Atlanta Electric & Ice Co. will install new machinery; now laying concrete foundation.

Tex., Gainesville.—Texas Power & Light Co., Dallas, will install additional machinery, including 225 H. P. Diesel engine and 250 K. W. generator.

Tex., McKinney.—City voted to sell municipal electric-light plant to Texas Power & Light Co. of Dallas, Tex.; latter under contract to improve property at cost of \$100,000 and to furnish natural gas within 1 year. (Lately noted.)

Tex., Plainview.—Texas Utilities Co. organized; H. Wurdack, Prest.; H. C. Randolph, V.-P.; Horace W. Beck, Secy.; Chas. A. Malone, Mgr.; offices at 750 Railway Exchange Bldg., St. Louis, Mo.; acquired electric, water and ice plants at Plainview, electric and ice plants at Lubbock, electric plant at Lockney, 75-mi. transmission system, etc., as lately stated. (Recently reported inceptd. with \$250,000 capital, acquiring various Texas plants, etc.)

Tex., Pampa.—Pampa Water, Light & Power Co., capital \$500, inceptd. by A. E. Davis, M. E. Davis and E. Cantler.

Va., Pennington Gap.—Electric Transmission Co., capital \$100,000, inceptd.; Arthur Hardgrave, Prest., Chicago, Ill.; B. F. Mays, Washington, D. C.

FERTILIZER FACTORIES

Ala., Dothan.—Home Guano Co., M. L. Hannahan, Gen. Mgr., let contract to Hugger Bros., 723 Bell Bldg., Montgomery, Ala., to erect 40x50-ft. burner-house and 40x220-ft. chamber building; cost about \$50,000; portion fireproof, balance mill construction; plans by owner; building materials have been purchased; equipment also reported purchased. (Home Guano Co. lately noted

to expend \$75,000 for improvements, including equipment to manufacture sulphuric acid for treating phosphate rock in making of acid phosphate.)

N. C., Greensboro.—American Agricultural Chemical Co., 92 State St., Boston, Mass., and 2 Rector St., New York, let contract to Hugger Bros., 723 Bell Bldg., Montgomery, Ala., to erect 180-200-ft. ordinary mill-construction building; cost about \$40,000; plans by engineering department of the Chemical Co.; E. L. Iddings, Constr. Engr., Woodstock, Md.; building materials purchased.

N. C., Shaleville.—E. V. Correll, Hot Springs, N. C., will expend about \$15,000 on erection of buildings for lately noted plant; install machinery, cost about \$6000; manufacture ground lime; daily capacity 60 tons.

FLOUR, FEED AND MEAL MILLS

Ala., Luverne.—Alabama Machinery & Supply Co. of Montgomery, Ala., is reported to have contract to install equipment for stock food plant.

Miss., Webb.—Webb Milling Co. will open bids Jan. 1 on 28x36-ft. 4-story ordinary construction building to cost \$2000; let contract to Sprout, Waldron & Co., Muncy, Pa., for roller flour mill equipment of 50 bbls. daily capacity; M. T. Bynum, Prest.; E. V. Cotee, V.-P.; W. J. Stephens, Secy.; N. M. Glover, Mgr. (Lately noted.)

N. C., Henderson.—Seaboard Feed & Produce Co. will install 50-ton molasses feed mill; purchased machinery; has building; cost of plant about \$5000.

N. C., Salisbury.—Albemarle Milling Co. will install plant for daily capacity from 115 to 125 bbls. flour, 500 bus. cornmeal and 24 tons fed; awarded machinery contract to Robinson Mfg. Co., Muncy, Pa.

FOUNDRY AND MACHINE PLANTS

Ala., Anniston.—Explosive Shells, etc.—Southern Munitions Corp., capital stock \$500,000, organized; Prest., Jas. Mitchell, Prest. of Alabama Power Co., 120 Broadway, New York, and Birmingham; V.-P., Theo. Swann, New York; leased Anniston Car Works (controlled by Illinois Car & Equipment Co., Chicago) and will equip for manufacturing explosive shells, high-grade electric furnace steel, etc.; ordered installation additional machinery to include 6-ton Hercules electric furnace costing \$60,000; total expenditure for improvements about \$100,000; has contract for 50,000 explosive shells for English army and anticipates large additions to this contract. (Anniston Ordnance Mfg. Co., capitalization \$1,000,000, lately noted to be organized to manufacture shells and steel, to utilize Anniston Car Works under direction Alabama Power Co., etc.)

Md., Baltimore.—War Munitions.—Papa Products Co., Frank W. Waterman, director, S. 15th St., Highlandtown, decided to equip its plant with machinery for manufacturing war munitions; recently completed two 1-story brick and concrete buildings and power-house on half-acre site, original intention having been to manufacture paper; understood to be completing arrangements for war-munitions contracts.

Md., Baltimore.—Machinery, Machine Guns, Explosive Shells, etc.—Poole Engineering & Machine Co., capital stock \$3,000,000 and bonds \$500,000, inceptd. to succeed present company; has 20-acre site and plant practically rebuilt at cost of \$800,000; remodeled old structures, erected additional buildings, installed new machinery, etc.; has 350-acre site at Texas, near Baltimore, for proving ground and loading station about completed; has European war contracts, approximating \$12,500,000, for 1-pounder rapid-fire machine guns and explosive shells; also other contracts at \$5,250,000 for heavy machinery, ordnance for United States Government, machinery for battleships, etc. (Previously mentioned as having large war contracts, to enlarge plant, build additional facilities at Texas, etc.)

Mo., St. Louis.—Stoves.—St. Louis Enamelled Range Co., capital \$200, inceptd. by F. E. Bryan, W. L. Culver and Wm. A. Koerner.

Mo., St. Louis.—Rail Joint.—Interlocking Rail & Structural Steel Co. organized; Fred Hyke, Prest. and Gen. Mgr.; F. W. Eckstein, Secy.-Treas.; offices at 523 Boatmen's Bank Bldg.; will manufacture interlocking rail joint invented by Jesse F. Barnhill.

Okla., Enid.—Pumps.—Wenslay Pump Co., capital \$25,000, inceptd. by J. G. Cook of Billings, Okla.; Ole Wensley of Enid, Okla., and Clarence M. Cook of Garber, Okla.

Okla., Sand Springs.—Farm Tractors.—Farm Engineering Co., capital \$100,000, inceptd. by A. J. and O. G. Patch, 242 School

St., Oshkosh, Wis., and Wm. S. Cochran of Tulsa, Okla.; will build plant to manufacture farm tractors; first unit to be 150x75 ft., 1 story, with saw-tooth roof; steel and concrete construction; install machine tools, etc. Address Patch Bros. at Oshkosh. (Lately noted.)

Tex., Dallas.—Engines and Boilers.—Southern Engine & Boiler Works of Texas, Henry N. Horr, Mgr. (lately noted inceptd.) capital \$50,000, will conduct business in Texas as branch of Southern Engine & Boiler Works, Jackson, Tenn.

Va., Cheriton.—Machinery.—Womble Machine Co., capital \$50,000, inceptd.; S. W. Womble, Prest.; J. V. Wright, Secy.

GAS AND OIL ENTERPRISES

Ark., Fort Smith.—Travelers' Oil & Gas Co., capital \$20,000, inceptd. by John Black, Andrew S. Dowd, B. D. Crane and others; will develop gas and oil wells in Kibler field of Crawford county.

Ala., Tuscaloosa.—Tuscaloosa Belt Ry. & Utilities Co. (Morris Bros. of Philadelphia, Pa.) let contract Municipal Engineering & Construction Co. of Atlanta, Ga., to complete gas mains; estimated cost \$12,000; begin erection of plant Dec. 1; pipe gas from coke ovens at Holt, 5 mi.; filed \$1,000,000 mortgage, covering bond issue of \$800,000 to provide for consolidation with Tuscaloosa Ice & Light Co.

Ark., Fort Smith.—Gas Distribution System.—Citizens' Gas Co., capital \$50,000, inceptd. by I. H. Nakdimen (City National Bank), Ben Cravens, C. C. Calvert, W. J. Johnston and others; plans to construct distributing system, furnishing gas to Fort Smith, Van Buren and surrounding cities.

Ark., Van Buren.—C. H. Reece of Coffeyville, Kans., leased 235 acres and will develop gas and oil wells.

Ark., Van Buren.—Clear Creek Oil & Gas Co. of Fort Smith, Ark., leased 1105 acres and will develop gas and oil wells.

Ark., Van Buren.—Dora Oil & Gas Co., capital \$10,000, inceptd. by C. H. Pratt, C. R. Cordell, T. Crawford and others.

Ark., Van Buren.—Company organized by S. B. Hawkins of Van Buren, M. C. Alexander of Mulberry, Ark., and others to develop oil and gas properties in Crawford county.

D. C., Washington.—Gas Tanks.—Washington Gas Light Co., 411 10th St. N. W., will remodel steel tank at 13th and N Sts. S. E. and tank at New Hampshire Ave. and F St. N. W.; cost \$9000.

Ky., Mayfield.—J. P. Akers and others will organize company to develop natural gas.

La., Lake Charles.—Hexagon Co., capital \$30,000, organized with Henry N. Pharr, Prest.; Happel Avery, first V.-P. and Gen. Mgr.; Chris A. Reiser, second V.-P.; Geo. J. Karsch, third V.-P.; A. W. Carlson, Secy.; M. T. Woodward, Treas.; controls 570 acres oil land.

La., Shreveport.—State Oil & Gas Co., capital \$100,000, inceptd.; J. C. Trees, Prest.; H. J. Parker, V.-P. and Gen. Mgr.; M. L. Benedum, Secy.; E. K. Smith, Treas.

Mo., Hannibal.—Oil Station.—Water-Pierce Oil Co. of St. Louis, let general contract L. M. Hager to erect tanks, warehouse and office building, and G. W. Williams for brick work and concrete foundation.

Okla., Anadarko.—Guarantee Oil & Gas Co., capital \$10,000, inceptd. by O. M. Topley, L. V. Coombs, A. H. Bales and others.

Okla., Ardmore.—Afro-American Oil Co., capital \$30,000, inceptd. by C. A. Kenyon, B. W. Wesley and H. M. McKissic.

Okla., Ardmore.—City contemplates bond issue to construct pipe line to gas fields. Address The Mayor.

Okla., Jennings.—Jennings Co-operative Oil Co., lately noted organized with J. J. Fitzpatrick, Prest., will open bids on derricks Jan. 15 and on drilling Feb. 1; pipe sizes 15, 12½, 10, 8 and 6½ in. (See Machinery Wanted—Well-drilling, etc.)

Okla., Kusa.—Kusa Oil & Gas Co., capital \$10,000, inceptd. by Walter S. Goodin, Merton Donlavy and L. L. Powell, all of Dewar, Okla.

Okla., Oklahoma City.—Carmac Oil Co., capital \$100,000, inceptd. by Jas. S. Gladish, M. L. Gladish and M. L. Scales.

Okla., Oklahoma City.—Big Ben Drilling Co., capital \$4000, inceptd. by J. W. Dawson, L. R. Dawson, A. K. Dawson and B. S. Dawson.

Okla., Oklahoma City.—State Lands Oil Co., capital \$25,000, inceptd. by Geo. H. Green (Colcord Bldg.), Oklahoma City; John H. Stearns and Ernest Munster of Chicago.

Okla., Poteau.—East Oklahoma Development Co., capital \$5000, inceptd. by Tom Wall, H. J. Fowler and W. C. Page.

Okla., Sapulpa.—Wick-Mars Oil & Gas Co., capital \$50,000, inceptd. by J. S. Wick, Jas. J. Mars, Harry Bradley and Elmer Boner.

Okla., Tulsa.—Omar Oil Co., capital \$5000, inceptd. by D. B. Bergman, John A. Basford and I. J. Underwood.

Okla., Tulsa.—Valley Oil & Gas Co., capital \$10,000, inceptd. by P. E. Magee and John C. Magee of Tulsa and R. E. Fuller of Los Angeles, Cal.

Okla., Oklahoma City.—Eastfields Oil Co., 1118 Colcord Bldg., capital stock \$25,000, will develop leased oil and gas properties. (See Machinery Wanted—Well-drilling Equipment, etc.)

Tex., Chapel Hill.—Chapel Hill Oil & Gas Co., capital \$20,000, inceptd. by J. R. Heartfield, F. O. Prescott and B. F. Teague.

Tex., McKinney.—Gas Mains.—Texas Power & Light Co. of Dallas, Tex., has agreed to furnish city with natural gas within 1 year. (See Electric Plants.)

Tex., Palestine.—A. L. Bowers, Mayor, will install machinery and develop oil wells; leased interest in Magnolia ranch on Trinity River.

Tex., San Antonio.—Apollo Oil & Gas Co., capital \$16,000, inceptd. by C. L. Nash, W. E. Mayers and G. E. Shippey.

Tex., San Antonio.—Sardinia Oil Development Co., capital \$5000, inceptd. by R. H. Russell, T. M. West, W. P. Ross and others.

W. Va., East Lynn.—East Lynn Oil & Gas Co. inceptd. by W. S. Napier, W. H. Newhouse, J. H. Meek and others.

W. Va., Huntington.—Allen Oil & Gas Co., capital \$25,000, inceptd. by C. J. French, C. W. Freeman, Thos. W. Harvey and others.

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ICE AND COLD-STORAGE PLANTS

Ala., Georgiana.—McGowin-Bennett Milling Co., W. M. McGowin, Prest., and J. R. Bennett, Secy., will establish 10-ton ice-plant; open bids March 1 on 40x30-ft. \$1900 iron-clad building; open bids Apr. 1 on equipment, cost \$10,000; address J. H. Berry, Constr. Engr., relative to building and machinery. (See Machinery Wanted—Ice Machinery.)

Ala., Anniston.—Polar Ice & Coal Co. will build addition to plant; 1 story; brick; 4x30 ft.; special wall and floor construction; concrete floor, under which will be 4 in. of cork insulation and under cork 6 in. of concrete; walls to be similarly built; estimated cost \$10,000.

Ark., Jonesboro.—Jonesboro Ice Co. has plans and specifications by T. Edison Mitchell of Jonesboro for cold-storage plant; 23x110 ft.; 2 stories.

Ark., Earle.—Earle Light, Water & Ice Co. organized with I. E. Freeman, Prest. and Gen. Mgr.; J. F. Reives, V.-P.; T. J. Biggs, Secy.; let contract York Mfg. Co., York, Pa., for ice plant. (Noted in Oct. as inceptd. with \$15,000 capital and to have purchased Crittenden Power Co.'s plant for \$30,000.)

Ga., Barnett.—Southeastern Cattle Co. inceptd. by R. A. Cason of Atlanta, Ga., and others, plans to build ice plant. (See Miscellaneous Enterprises.)

Ky., Carlisle.—Carlisle Electric & Power Co. increased capital from \$15,000 to \$30,000; will build and equip ice factory.

La., Shreveport.—Crawford, Jenkins & Booth, Ltd., considering installation of cold-storage plant, in connection with grocery. (See Machinery Wanted—Cold-Storage Equipment.)

N. C., Lincolnton.—Johnston Ice & Fuel Co., capital \$15,000, inceptd. by Jos. B. Johnston, W. H. Childs and R. M. Roseman, Jr.; will build plant with daily capacity of 12 tons ice.

Okla., McAlester.—A. C. Murray of Clarksville, Tenn., organized company with \$50,000 capital and will build ice factory; will also manufacture cottonseed-oil products.

Tenn., Columbia.—Columbia Ice & Cold Storage Co. will build 2-story cold-storage room adjoining plant; add 70,000 cu. ft. space, making total space of 100,000 cu. ft.

Va., Bridgewater.—Bridgewater Creamery & Ice Corp., capital \$15,000, chartered; W. H. Sipe, Prest.; O. D. Garber, Secy.

Va., Roanoke.—Citizens' Crystal Ice Co. will enlarge cold-storage plant.

Va., Winchester.—C. L. Robinson Ice & Cold-Storage Corp. will build (about) 150-ft. fireproof cold-storage building; construction by the company; C. L. Robinson

Freest; Wm. R. Hillyard, Secy.; F. A. Robinson, Mgr. (See Machinery Wanted—Sand, Cement and Tile; Mixer (Concrete).)

W. Va., Mannington.—Mannington Ice & Storage Co., Hubert A. Sinsel, Propr., will establish lately-noted ice plant; erect 50x80-ft. steel building; let machinery contract to Triumph Ice Machine Co., Cincinnati, O.

IRON AND STEEL PLANTS

Ala., North Birmingham.—Iron Furnace.—Sloss-Sheffield Steel & Iron Co., Birmingham, Ala., has blown in iron furnace; contemplates daily output of 300 to 350 tons pig-iron. (Lately noted.)

Md., Baltimore.—Steel Furnaces.—Hess Steel Co., Henry Hess, Prest., Witherspoon Bldg., Philadelphia, and Bridgeton, N. J., let contract to Dietrich Bros., Davis and Pleasant Sts., Baltimore, to erect furnace and machine buildings on site near Biddle St. and Loney La.; steel construction; corrugated-iron siding and roof; 250 tons steel; buildings to cost \$30,000. (Lately noted inceptd. with \$1,500,000 capital; organized to manufacture high-grade alloy billets, etc.)

IRRIGATION SYSTEMS

Tex., Anahuac.—Bulkhead.—Trinity River Irrigation Dist. voted \$30,000 bonds to repair bulkhead across Turtle Bay damaged by Aug. storm. (Lately noted.)

Tex., Leon Springs.—Leon Springs Irrigation Co. plans to build reservoir and pumping plant to irrigate 3017 acres in Leon Springs Valley.

Tex., Brownsville.—La Fera Mutual Canal Co., Geo. H. Byrnes, Receiver, will expend \$100,000 to \$150,000 for improvements and extensions to include installation of additional 48-in. pumping unit on back of Rio Grande and necessary engine to increase capacity of system at least 150 per cent.; also plans to remodel and rebuild irrigation canals and build detour canal line about 4 or 5 mi. long; now has about 25 mi. of canals and 75 mi. of laterals, covering 20,000 acres.

Tex., Marfa.—White Elephant Irrigation Co. plans to build water-storage reservoir of 5,333,680 cu. ft. and to install pumping plant for irrigation.

LAND DEVELOPMENTS

Ala., Mobile.—Southern Realty & Investment Co., C. C. Farmer, Prest., 30 N. Dearborn St., Chicago, Ill., purchased 12,000 acres in Mobile county; will develop and colonize by Northern farmers, who will make their own improvements; company's capital stock \$500,000; has option on 28,000 acres additional.

Ala., Whistler.—Southern States Profit Sharing Co. inceptd. with Dave S. Bauer, Prest.; Frank J. Thompson (of North Mobile Development Co.), Secy., both of Mobile; W. C. Stapleton, V.-P., Bay Minette, Ala.; purchased lands of North Mobile Development Co. near Whistler and will develop; plans to divide property into building lots and factory sites, construct streets, etc.

Fla., Blountstown.—Florida Home Land Co., capital \$50,000, inceptd. by A. A. Riddleberger of Hinton, W. Va.; G. R. Edgar, W. C. Slonaker and C. E. Krebs of Charleston, W. Va., and H. C. Shanhaltz of Kayford, W. Va.

Fla., Orlando.—Lake Conway Land Co., capital \$50,000, inceptd.; M. O. Overstreet, Prest.; W. J. Conoley, V.-P.; Arthur N. Goodwin, Secy.-Treas.

Ga., Columbus.—Columbus Country Club will enlarge present 9-hole golf course to 18-hole course; will purchase 30 acres.

Ky., Lexington.—Kenard Union Land Co., capital \$25,000, inceptd. by D. W. Kinney of Lexington, J. R. Combs and W. G. Sellers of Hazard, Ky.

N. C., Durham.—Parrish-Curley Land Co., capital \$125,000, inceptd. by E. J. Parrish, C. C. Curley and Jones Fuller.

N. C., Oxford.—Carolina Farm Co., capital \$10,000, inceptd. by Jno. A. Topping, W. B. Topping, B. M. Caldwell and H. N. Caldwell.

S. C., Charleston.—Tidewater Corp. chartered; Rene Ravenel, Prest.; Jas. Allen, V.-P.; J. M. Frampton, Secy.-Treas.

Tenn., Memphis.—Speedway Central Land Co., capital \$50,000, inceptd. by T. J. Turley, Millard Nail, E. R. Turley and others.

Tex., Dallas.—Park Board plans construction of 9-hole golf course; estimated cost \$10,000, including building, grading and draining grounds and for sewerage connections.

Va., City Point.—Western Land Co., capital \$15,000, inceptd.; W. Moncre Gravatt, Prest.; R. H. Frederickson, Secy.

Va., Norfolk.—Greenwood Place Corp., capital \$15,000, chartered; W. P. Dodson, Prest.; R. S. Jeffries, Secy.

Va., Norfolk.—Cosmos Corp., capital \$15,000, chartered; A. W. Cornick, Prest.; Aaron Milhado, Secy.-Treas.

Va., Petersburg.—Greater Petersburg Development Corp., capital \$50,000, chartered; Walter Sachs, Prest.; Jas. C. Rees, Jr., Secy.-Treas.

Va., Richmond.—A. R. McClellan purchased 100 acres at Westhampton; will develop into high-class building sites; improvements to include sewerage, roadways, water supply, trees, etc.; Waddill & Dabney, Engrs., 206 Real Estate Exchange Bldg., 22 N. 9th St., Richmond.

Va., Staunton.—Country Club will enlarge golf course.

LUMBER MANUFACTURING

Ark., Pine Bluff.—W. S. Elder, noted in Oct. as purchasing timber land and to manufacture stumpage, is making hickory automobile stock and wagon and carriage woods; daily capacity 10,000 ft.; plant cost about \$5000.

Ga., Soperton.—Durdin-Coleman Lumber Co. will build saw-mill; develop Gillis tract of timber.

Ky., Cornettsville.—Stephenson Hardwood Lumber Co., Huntington, W. Va., purchased for development an additional timber tract on Leatherwood Creek; will locate mills.

Miss., Forest.—Blenville Lumber Co., W. A. Davenport, Prest. and Mgr., is proceeding with construction of plant; W. R. Neislar, bulider; mill and electric light plant to be operated by same power. (See Electric Plants.)

Miss., Hillsdale.—Southern Lumber & Timber Co., R. Batson, Prest., Lumberton, Miss., purchased (from Edw. Lowe, Grand Rapids, Mich.) several thousand acres virgin long-leaf yellow pine timber land at \$200,000; will improve mill; construction by company force; mill and equipment improvements cost about \$35,000; all purchases made; increases capacity of mill; machinery contract let to Filer & Stowell Co., Milwaukee, Wis.; locomotives to Heislner Locomotive Works, Erie, Pa.; log cars to Kilby Locomotive & Machine Co., Anniston, Ala.

Miss., Rankin County.—Gammill Lumber Co. of Pelahatchee, Miss., purchased hardwood and yellow pine timber lands, about 54,000 acres, in Rankin, Madison, Leake, Scott and Neshoba county; reported to build saw mill at or near Jackson, Miss.

Mo., Cartersville.—Richardson-King Lumber Co., capital \$10,000, inceptd. by O. E. Richardson, only King and E. C. Abernathy.

Mo., Kansas City.—Louden Lumber & Mining Co., capital \$10,000, inceptd. by E. J. Chas. and Julia G. Buschow.

Tenn., Chattanooga.—Hill Lumber Co. of Decatur, Ala., will build planing mill.

Tenn., Knoxville.—Witt Lumber Co., cor. Asylum & Southern Ry. (lately noted inceptd., capital \$15,000), organized; H. D. Blanc, Prest.; J. P. Witt, V.-P. and Mgr.; E. F. Witt, Secy.; will erect 40x64-ft. mill-construction building, cost \$1500; construction by the company; install woodworking machines (purchased), cost \$5000.

Tenn., Memphis.—Clinton Lumber Co., capital \$60,000, inceptd. with J. L. Hutter, Prest. and Acting Treas.; R. B. Clinton, V.-P.; Thos. R. Boyle, Secy.; consolidation of Clinton Lumber Co. and Memphis Realty Co.

Tenn., Nashville.—Cache Creek Lumber Co., capital \$50,000, inceptd. by Robt. S. Henry, Ben Feldman, M. P. O'Connor and others.

Tex., Hondo.—Kuntz-Flint Lumber Co., capital \$10,000, inceptd. by T. H. Flint of Hondo, John J. Kuntz and Roy B. Hollingsworth of San Antonio, Tex.

Tex., Orange.—Lutcher & Moore Lumber Co. has plans for construction plant with 10-hour capacity 200,000 to 250,000 ft. lumber; equipment to include monorail system, electrically operated. (Lately reported to rebuild mill burned at loss of \$150,000.)

METAL-WORKING PLANTS

Md., Baltimore.—Tubes.—Baltimore Tube Co., Ostend and Wicomico Sts., let contract West Construction Co., Knickerbocker Bldg., Baltimore, to erect 2 additional buildings; both to be 1 story, of brick and concrete; 1 to be 30.8x44.3 ft. and other 37½x17.2 ft. (Noted in July.)

W. Va., Wheeling.—Roofing, etc.—Wheeling Ceiling & Roofing Co., 803 Schuylbach Bldg., Wheeling, has plans for additional building, about 60x175 ft., at Warwood plant. (See W. Va., Wheeling.)

W. Va., Wheeling.—Roofing, etc.—Wheeling Ceiling & Roofing Co., 803 Schuylbach Bldg., decided to increase capital from \$150,000 to \$400,000; plans to issue \$75,000 of this stock now; has building at Warwood plant nearing completion and has plans for another structure, about 60x175 ft. (Lately noted.)

MINING

Ark., Jonesboro.—Zinc, etc.—Pine Ridge Mining Co. organized with C. L. Kennard, Prest. and Mgr.; M. H. Rhodes, V.-P.; H. K. Brown, Secy.-Treas.; will develop 80 acres zinc land and 180 acres paint dirt and potter's clay; also mine kaolin; install kaolin washing machinery. (Lately noted inceptd. with \$40,000 capital.)

Ark., Marion County.—Zinc.—Harry E. Littleton of Harrison, Ark., will develop zinc mines.

Ark., Rush.—Zinc.—Geo. W. Murphy of Little Rock and others will build 100-ton concentrating plant at Dixie Girl zinc mine on Bont Creek.

Ark., Rush.—Zinc.—Shepherd Mining Co. is reported as having plans prepared for concentrating plant at Edith mine.

Ark., Rush.—Zinc.—Jim McCarty and others of Yellville, Ark., will build concentrating plant at Yellow Rose mine; let contract.

D. C., Washington.—Friendship Mining & Development Co., capital \$25,000, inceptd. by Wm. B. Davis, Wm. H. Fisher and Ralph L. Galt, 1390 N. St. N. W.

Miss., Hattiesburg.—Gravel.—Dixie Gravel Co., capital \$10,000, inceptd. with I. V. Austin, Prest.; N. W. Rockett, V.-P.; H. F. Wheeler, Secy.-Treas.; purchased 60 acres near Rawls Springs; will develop sand and gravel mine, manufacture concrete material, brick, tiling, etc.; ordered machinery.

Mo., Cardin, P. O. Joplin.—Zinc.—Admiralty Zinc Co. is reported to have purchased properties of Century Zinc Co. and to further develop; sinking 5 new shafts and having plans prepared for 2 mills.

Mo., Carthage.—Lead and Zinc.—National Zinc & Lead Co., Boston, Mass., lately noted (under Mo., Webb City) letting contract for 300-ton concentrating plant to Webb City and Cartersville Foundry & Machine Works, Webb City, will develop 40 acres; Wm. R. Brown, Prest.; Frank G. Wright, Secy.; John J. Hammers, Treas.; John W. Cawley, Gen. Mgr.

Mo., Joplin.—Lead and Zinc.—Inca Mining Co., capital \$10,000, inceptd. by Wallace B. Kane, Chas. Bushner and J. W. Creech.

Mo., Joplin.—Lead and Zinc.—Blatchley Mining Co. will build 200-ton tailing mill; electrically equipped; 2 rougher jigs, cleaner, dewatering screens and 6 Wilfrey tables; United Iron Works has contract.

Mo., Joplin.—Lead and Zinc.—Cinomo Lead & Zinc Co., cap. \$40,000, inceptd. by J. Harry Lindeman, W. H. Mallory, Robt. D. Owen and others.

Mo., Joplin.—Lead and Zinc.—Interstate Zinc & Lead Co., capital \$50,000, inceptd. by John W. Dixon, A. W. Thurman and C. Scott.

Mo., Herculaneum.—Silica Sand.—American Silica Sand & Mining Co., capital stock \$15,000, organized; Geo. D. De Buchananne, Prest.-Mgr.; H. D. Evans, V.-P.; J. D. De Buchananne, Secy.-Treas.; will develop 60 acres silica sand; daily output, 800 tons; install tramway, crushers, air compressors, boilers, etc. (See Machinery Wanted—Air Compressors & Boilers.)

Mo., Kansas City.—Minerals.—Louden Lumber & Mining Co., capital \$10,000, inceptd. by E. J. Chas. and Julia G. Buschow.

Mo., Kansas City.—Lead and Zinc.—Iroquois Mining Co., capital \$50,000, inceptd. by E. M. Gordon, R. L. Dennison and A. L. Stump.

Okla., Oklahoma City.—Smelter.—Oklahoma Smelter Co., capital \$50,000, inceptd. by G. E. Nicholson and Leigh Hunt of Kansas City, Mo.; Ralph Nicholson of Dewar, Okla., and others.

S. C., Greenville.—Stone.—Southern Crushed Stone Co., capital \$15,000, inceptd. by Maurice Klein and Harry Klein to quarry and crush stone.

Tex., Freeport.—Sulphur.—Freeport Sulphur Co. (S. M. Swenson & Sons, 37 Wall St., New York) has completed plans for doubling output of Freeport sulphur mines; begun foundation work for erection of 12 additional boilers, each of 700 H. P.; new plant will give company boiler energy exceeding 16,000 registered horse-power, developing more than 22,000 horse-power; plans to increase sulphur output from 200,000 to 400,000 tons annually; present plant uses 1600 bbls. crude oil daily.

Va., Faber.—Lead and Zinc.—Atlantic Lead & Zinc Co. inceptd.; Arthur M. Wilson, Prest., Staunton, Pa.; Wilfred E. Ervin, Secy.-Treas., Boothwin, Pa.

W. Va., Olmstead.—Sand.—Elkhorn Sand & Supply Co. (lately noted inceptd., capital \$20,000) organized; F. M. Archer, Bluefield, W. Va., Prest.; W. W. Wood, Secy., Treas. and Mgr.; succeeds Elkhorn Sand Co.; markets washed wind-screened sand from Cape Henry, Va.; daily capacity sand pit, 3000 tons.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile.—Docks, Terminals, Etc.—City Com. has engaged Ford, Bacon & Davis, 921 Canal St., New Orleans, La., and New York, as engineers for docks, terminals, etc., on waterfront; engineers will survey, prepare tentative plans, suggest methods, etc., for providing complete municipal terminal system.

Ala., Mobile.—Overhead Conductors.—Magnolia Compress & Warehouse Co. (subsidiary of Warrant Warehouse Co. of Birmingham, Ala.) has preliminary plans for construction of system of elevated railways or overhead conductors between warehouse properties and waterfront; elevators at each end to permit of lifting of electrically-propelled tractors or trucks to level of overhead system at one end and lowering of carriers to ground level at other end; system to include devices for distribution where needed.

Fla., Miami.—Harbor Improvements.—City invites bids until Dec. 22 for harbor improvements, to include channel across Biscayne bay, turning basin, slip to terminal dock, concrete dock, etc.; specifications for docks include 460 reinforced concrete piles 25 ft. long, total length 11,500 lin. ft.; 168 reinforced concrete stringers; 17,584 sq. ft. reinforced concrete floor slabs 10 in. thick, 687 cu. yds.; 16,380 sq. ft. reinforced sheet piling; 92 wood anchor piles 20 ft. long; 92 wood anchor piles 10 ft. long; 92 anchor rods; 23 cast-iron snubbing posts; build south slip now; build north and longer slip later; ship channel and turning basin will require 1,194,000 cu. yds. earth and sand excavation and 467,000 cu. yds. rock excavation; channel across bay to be 100 ft. wide and 18 ft. deep; channel to connect turning basin to be 80 ft. wide and 12 ft. deep; area of turning basin, 559,000 sq. ft.; rock cut to be slanted back ¼ of ft. for every foot in depth; \$260,000 bonds voted to construct ship channel. Government was lately noted to have let contract Furst-Clark Construction Co., 1515 Fidelity Bldg., Baltimore, Md., to dredge and remove rock at Miami Harbor and St. Lucie Inlet; city noted as inviting bids to dredge channel through Biscayne Bay, build docks and construct railroad; also to have engaged Isham Randolph, Engr., Jacksonville, to make soundings of harbor and prepare plans and specifications for ship channel, etc. (See Machinery Wanted—Concrete Dock, Excavating Slip, Basin and Channel.)

La., New Orleans.—Elevator Wharf.—Port Commrs. let contract Doullutt & Williams of New Orleans at \$188,000 to construct wharf for grain elevator; 1350 ft. long and 12 ft. wide; Marks Electrical Construction Co. of New Orleans is lowest bidder at \$21,690 for underground conduit, wiring, etc., of cotton warehouse.

La., New Roads.—Levee.—State Engrs., New Orleans, La., let contract Hercules Co., New Orleans, La., to construct Cocoa Levee, 2 sections, about 60,000 cu. yds.; cost about \$6600.

La., New Orleans.—Revetment.—Board of State Engrs. will construct following revetment work in Plaquemines Parish, Mississippi River, right bank; Happy Jack to Butler levee, 2 sections, 5600 lin. ft.; Butler to Melrose levee, 2 sections, 800 lin. ft.; bids until Dec. 8. (See Machinery Wanted—Revetment.)

La., Pointe a la Hache.—Revetment.—State Board of Engrs., New Orleans, La., is reported to have let contract A. C. Richaume of New Orleans to construct wooden revetment work on right bank Mississippi River; 7170 ft. from Deer Range to Junior and 4560 ft. on McCurdy Levee.

Md., Baltimore.—Tunnel.—Pennsylvania R. R., Alex. C. Shand, Ch. Engr., Broad St. Station, Philadelphia, is having plans prepared by its engineering department for improvements to Union Tunnel, extending from Union to Fulton Station; plans are reported to provide for lowering of present tunnel 2 ft. and for widening it from 2 to 3 ft.

Md., Baltimore.—Coal Pier.—Baltimore & Ohio R. R. Co., F. L. Stuart, Ch. Engr., awarded contracts for constructing and equipping coal pier at Curtis Bay; superstructure, bulkhead and dredging to H. S.

Kerbaugh, Inc., Munsey Bldg., Baltimore, and New York; sublet superstructure to Consolidated Engineering Co., 242 Calvert Bldg., Baltimore; conveying machinery to Robbins Belt Co., New York; car dumpers to McMyler Interstate Co., Cleveland, O.; grading to Smith McCormick, Easton, Pa.; thawing shed (for carloads of coal, during cold weather, prior to being dumped over pier) to Surety Engineering Co., New York; latest plans provide for annual capacity 10,000,000 tons coal; equipped to load vessels from either side of pier or to concentrate total capacity to loading one vessel; hourly capacity about 6000 tons; car dumpers to handle cars 53 ft. long and have hourly capacity forty 100-ton cars; total expenditure about \$1,500,000. (Plans for coal pier, invitation for construction bids, etc., heretofore mentioned.)

S. C., Hartsville—Heating Plant.—Coker College let contract W. B. Guimarin & Co. at \$17,500 to install heating plant, and Perry-Mann Electric Co. (both of Columbia, S. C.) to install electric-power generating plant; C. C. Wilson, Archt., Columbia, S. C.

Tenn., Memphis—River Improvement.—United States Engrs. under Maj. E. M. Markham, are preparing plans for canal that will convert flow of Wolf River into Isle of Mud chute, so that Memphis harbor will be washed out and channel maintained; plans will provide for canal 50 ft. wide at top and 40 ft. wide at bottom, beginning in rear of county jail and extending across land at mouth of Wolf River, emptying into newly-formed chute at point off Poplar Ave.; Col. McD. Townsend, Chrmn. Mississippi River Com., estimates total cost at \$150,000 of which \$55,000 is available.

Va., Norfolk—Dredging.—Navy Dept., Bureau of Yards and Docks, Washington, D. C., opened bids for 700,000 cu. yds. dredging at Norfolk Navy-yard; Bay State Dredging Co. of Boston, Mass., is lowest bidder and will probably receive contract; estimated cost \$98,000. (Call for bids lately noted.)

Va., Richmond.—Government let contract Maryland Dredging & Contracting Co., 1515 Fidelity Bldg., Baltimore, at about \$40,000 to dredge James River Channel, removing about 20,000 cu. yds. material, mostly rock; for short distance channel will be widened to 200 ft. and deepened to 18 ft. (Noted in September.)

Va., Staunton—Swimming Pool.—Country Club contemplates building swimming pool.

MISCELLANEOUS ENTERPRISES

Ala., Florence—Engineering.—Allentown Engineering Co., capital \$10,000, inceptd.; Hugh G. Stokes, Pres.; S. C. Harrell, V.-P.; H. L. Lewis, Secy.-Treas.

Ala., Mobile—Grain Elevator.—Jos. F. Durham, Pres. Southern Brass Works, secured option on grain elevator from Mobile & Ohio R. R.; plans to organize company with \$25,000 capital to improve and operate; total estimated expenditure \$40,000.

Ark., Arkadelphia—Publishing.—Dixie Book Co., capital \$2000, inceptd. by J. J. Pannell, S. Y. Jamerson, J. C. Wallace and others.

Ark., Bay Village—Livestock.—Bay Village Livestock Co., capital \$20,000, inceptd. by W. M. Bledsoe, W. P. Laster and L. E. Held.

Fla., Key West—Molasses Tanks.—Florida East Coast Ry. Co., E. Ben Carter, Chief Engr., St. Augustine, is reported to construct 2 tanks, each with capacity 1,000,000 gals.; let contract T. A. Lumley, Key West, to handle material for foundations and furnish sand for concrete foundations; company to ballast its ferry steamer (between Key West and Havana) with molasses after completion these tanks; now ballasts with water.

Fla., Kissimmee—Cattle.—Osceola Cattle Co., capital \$250,000, inceptd.; P. K. Weaver, Pres.; D. G. Wagner, V.-P.; G. P. Garrett, Secy.-Treas.

Ga., Barnett—Cattle.—Southeastern Cattle Co., capital \$25,000, inceptd. by R. A. Cason of Atlanta, Ga., and others; plans to establish packing-house and ice-plant.

Ga., Lafayette—Printing Plant.—Walker County Messenger, E. P. Hall, owner, is reported to erect building; 1 story and basement; pressed brick; install printing equipment.

Ga., Macon—Navigation.—Macon-Atlantic Navigation Co. increased capital stock from \$80,000 to \$200,000.

Ga., Rome—Laundry.—T. C. Moore of Jellico, Tenn., and others leased building and will remodel; install equipment for steam laundry. (Lately noted.)

Ga., Savannah—Fire-alarm System.—City

let contract Gamewell Fire Alarm & Police Telegraph Co. of New York to install 50 fire-alarm boxes; estimated cost, \$6200.

Ky., Lexington—Electrical.—Fisher Electric Co., capital \$4000, inceptd. by J. G. and M. E. Fisher of Lexington and J. D. Soule of Winchester, Ky.

Ky., Louisville—Dairy.—D. H. Ewing's Sons will build dairy; plans for equipment provide for 22 motors, aggregating 110 H. P.; will probably purchase engine and generator, using its own steam plant; J. B. Hutchings, Archt., Columbia Bldg., Louisville.

Md., Baltimore—Zinc.—Refractory Zinc Ore Treatment Co., 3 William St., New York, will install machinery at 16th St. and Second Ave. to treat zinc for use in manufacturing munitions of war; A. W. Hahn, Mgr. (Mr. Hahn lately reported to install galvanizing plant.)

Mo., Hannibal—Taxicabs.—True's Taxicab Co., capital \$3000, inceptd. by Wm. P. and Rebecca A. True and Alta W. Mills.

Mo., Kansas City—Electrical and Gas Supplies, etc.—Magee-Reppell Electric Co., capital \$10,000, inceptd. by John J. Magee, Lee Brokaw and Ada Suleiba.

Mo., St. Joseph—Old Iron, etc.—Missouri Iron & Metal Co., capital \$15,000, inceptd. by Henry Epstein, R. Wolesky and J. Adler.

Mo., St. Louis—Electrical Supplies.—T. C. White Electrical Supply Co., capital \$10,000, inceptd. by Wilbur H. Orville K. and Emma T. White.

N. C., Asheville—Paint and Wallpaper.—Fitzpatrick Paint & Wallpaper Co., capital \$5000, inceptd. by Bruce Brysdale, R. L. Fitzpatrick and B. H. Pace.

N. C., Greensboro—Publishing.—Methodist Protestant Publishing House changed name to Carolina Board of Education of Methodist Protestant Church, Inc., and increased capital stock from \$10,000 to \$100,000.

N. C., Winston-Salem—Building.—North State Building Co., capital \$125,000, inceptd. by W. W. Walsh, W. W. Moore, John Rawley and others; to contract for buildings.

S. C., Rock Hill—Laundry.—U. C. Partlow and C. W. Frew, owners of Crescent Laundry, purchased equipment of old Rock Hill steam laundry and will install additional machinery.

Okla., Geary—Publishing.—Seger Publishing Co., capital \$2000, inceptd. by Nentha H. Seger, John D. Weber and Jessie Mattoon Seger.

Okla., Yukon—Publishing.—Yukon Sun Publishing Co., capital \$2000, inceptd. by J. F. Krouth, T. A. Krouth and C. W. McComas.

S. C., Orangeburg—Bottling Plant.—Fairley Bros., Orangeburg and St. George, S. C., contemplates installing bottling plant. (See Machinery Wanted—Bottling Machinery.)

Tex., San Angelo—Abattoir.—City contemplates construction abattoir; Geo. J. Bird, Mayor.

Va., Hopewell—Laundry.—Hopewell Steam Laundry (in Oct. noted inceptd., capital \$50,000) is proceeding with erection of 3-story 80x50-ft. ordinary brick construction building; Stewart Realty Co., Hopewell, Contr.; machinery order placed, cost about \$9000; R. L. Ott, Pres., 1211 First National Bank Bldg., Richmond, Va.; Geo. W. Howell, Secy.-Mgr.

Va., Norfolk—Contracting.—W. H. French Dredging & Wrecking Co., capital \$50,000, incorporated; W. H. French, Pres.; Geo. L. Green, Secy.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Bakery.—Fles Realty Co. has plans by Joy-Marriott Co. of Birmingham for bakery, 60x150 ft., fireproof construction, for Birmingham Bread Co.; also proposes to add 2 or 3 stores, about 2 stories high, of fireproof construction.

Ala., Montgomery—Medicine.—Yellow Pine Medicine Co. inceptd. by C. B. Bozeman, Tom C. Johnson, Woolford Mabry and others.

Fla., Jacksonville—Skirts and Dresses.—Wiener & Scherer, 16, 18 and 20 E. 12th St., New York, leased second floor of Knight Bldg., Laurel and Duval Sts.; will equip to manufacture skirts and dresses; install 100 sewing machines.

Fla., Jacksonville—Motion-picture Films.—Eagle Film Mfg. & Producing Co., A. S. Roe, Pres., Chicago, Ill., is reported as contemplating erection of plant to manufacture motion-picture films.

Fla., Sanford—Boats.—Sherman & Kennison, S. Sherman, Mgr., has building for lately-noted plant; is constructing yacht basin for building and repairing all kinds of boats; will install wood-working machinery.

Fla., Tarpon Springs—Glass.—M. D. Williams of Middleport, N. Y., and Tarpon

Springs, purchased 6 acres glass sand at Lake Villa and will establish glass factory. (Lately noted.)

Ga., Americus—Marble.—Schneider Marble Co., capital \$20,000, inceptd. by E. C. E. E. and H. S. Schneider.

Ga., Atlanta—Tires and Rubber.—Goodyear Tire & Rubber Co., Jas. E. Taylor, Local Mgr., 223 Peachtree St., leased site 49x199 ft. on which to erect building; 2 stories and basement; steel and reinforced concrete; front entirely of glass; 16,000 sq. ft. floor space.

Ga., Gainesville—Candy.—B. H. Merck will establish candy factory; A. F. Herring in charge.

Ga., Macon—Chemicals.—McCabe Chemical Co., Charleston, S. C., will make additions to Macon plant, lately noted purchased. (See S. C., Charleston.)

Ky., Ashland—Dyes.—Eastern firm secured price from E. H. Gartrell, Gen. Mgr. Ashland Fire Brick Co., on 20 acres bottom land on Ohio River; firm's representative stated his principals expect to extract dyes from coal, using 10 cars coal daily. (Wm. Salisbury, Mayor, lately negotiating with New York capitalists for site for \$600,000 dye plant.)

Ky., Louisville—Powder and Soap.—Jefferson Powder & Soap Works, capital \$27,000, inceptd. by John N. Buford, C. W. Mentzen-dorf, C. C. Bosworth and J. H. Haag.

Ky., Louisville—Medicine.—Wulf Pharmacal Co. inceptd. by John H. Wulf, Henry Kleier, Jr., Louis M. Stoke and others.

La., New Orleans—Rendering Plant.—New Orleans Butchers' Co-operative Abattoir Co. contemplates building rendering plant for fallow.

La., New Orleans—Asphalt.—Warren Bros. Co., 59 Temple St., Boston, Mass., is lowest bidder at \$3,300 to build asphalt plant at municipal repair plant; A. G. Ricks, Commissioner Dept. of Public Finances. (Call for bids lately noted.)

Md., Baltimore—C. W. Christian, 401 E. 25th St., plans to establish factory, seeking suitable buildings with 250,000 sq. ft. floor space; character of plant not announced; rumor states is to manufacture war munitions.

Md., Baltimore—Spices, etc.—McCormick & Co., McCormick Bldg., inceptd. with \$500,000 capital stock by Willoughby M. McCormick, Roberdeau M. McCormick, Wm. Lee Bean and others; will continue established plant.

Md., Elkton—Safety Lamps.—Poeck Safety Lamp Co. inceptd. by Clement M. Egner and others.

Md., Elkton.—Burdett Mfg. Co., capital \$100,000, inceptd. by Clement M. Egner and others.

Miss., Laurel—Ice-cream.—Pearson Ice-Cream Co., N. C. Pearson, Propr., Central Ave., is erecting lately-noted ice-cream factory; W. H. Norris, Contr.; 25x90-ft. 6500 2-story reinforced concrete building; white enamel brick front; plate-glass windows; elevator; electric lighting; machinery supplied; total cost of plant above \$10,000; estimated daily capacity ice-cream, 1000 gals.

Mo., Kansas City—Motor Specialties.—Motor Specialties Co., capital \$15,000, inceptd. by E. J. Hess, W. D. Mahoney and Owen J. McClaughery, to manufacture automobile shock absorbers, etc.

Mo., St. Joseph—Paper Boxes.—St. Joseph Paper Box Co., 115 Francis St., organized with L. C. Hamilton, Pres.; C. E. Wright, Treas.; B. W. Lizenby, Secy. and Mgr. (In Oct. noted inceptd. with capital \$25,000.)

Mo., St. Louis—Automobile Wrench.—Hayward Wrench Co., capital \$100,000, inceptd. by Hubert H. Hayward of Springfield, Mo.; Homer Hayward and Lewis T. Dunaway, both of Dadeville, Mo.

Mo., St. Louis—Bedding, etc.—Blackmore Bedding Co. leased 3-story building at 307-313 S. Main St.; will manufacture furniture in addition to manufacturing box springs and mattresses.

Mo., St. Louis—Washing Machines.—Utahna Development Co. leased building at 1210-12 S. 8th St.; will equip for manufacturing electric washing machines; install lathe, punching press and drill press; has balance of equipment in present quarters; O. G. Pfeiffer, Pres.; H. S. Stowe, V.-P. and Mgr.; E. C. Buege, Secy.

Mo., St. Louis—Workingmen's Clothing.—Star Clothing Co., W. F. Houchin, Gen. Mgr., purchased 5-story building at Broadway and Hickory St. and will remodel as clothing factory; bids opened; has had lease on 2 floors, but now will occupy entire building.

Mo., St. Louis—Soap, etc.—Purity Products

Co., capital \$2000, inceptd. by F. H. Linsley, S. S. Burris and S. L. Burris.

N. C., Albemarle—Bottling.—L. D. Foster, Salisbury, N. C., will install Mint Cola bottling plant; purchased equipment.

N. C., Charlotte—Chemicals.—McCabe Chemical Co., Charleston, S. C., will make additions to Charlotte plant, lately noted purchased. (See S. C., Charleston.)

N. C., Dunn—Bottling.—Dunn Christo Cola Bottling Works (lately noted inceptd., capital \$10,000) has purchased machinery, cost about \$1500, for bottling soft drinks; daily capacity 400 doz.; H. S. McKay, Pres.; A. D. Wilson, V.-P.; W. H. Harrings, Secy.; R. W. Pope, Manager.

Okla., Sand Springs—Wearing Apparel.—Sand Springs Home at Widows' Colony will erect factory building; brick; 2 stories; 50x110 ft.; lower floor to be equipped as overall and ladies' wear factory; building and machinery proposals to be addressed to Ed. A. Page, Secy.

Okla., Tulsa—Sulphuric Acid.—Oklahoma Chemical Co., Oklahoma City, Okla., is reported to have purchased site on which to build plant to manufacture sulphuric acid, silica and caustic sodas.

S. C., Belton—Adjustable Bearings.—Adjustable Bearing Co., capital \$25,000, inceptd.; S. H. McGhee, Pres.; C. F. Cox, V.-P.; L. W. Stansell, Secy.; F. M. Cox, Treas. and Gen. Mgr.

S. C., Charleston—Sulphuric Acid, etc.—McCabe Chemical Co. (W. Gordon McCabe, Jr.), lately noted having acquired properties of Interstate Chemical Corp. in Charleston, Charlotte, N. C., and Macon, Ga., and to make additions, will install sulphur burners and concentrators for sulphuric acid; also additions to present plants; cost \$25,000; all machinery has been purchased.

S. C., Summit—Turpentine Distillery.—Fred G. Hartley will rebuild plant noted burned; erect 16-bbl. still; construction by owner; install machinery, cost \$600.

Tenn., Chattanooga—Tannic Acid.—Marion Extract Co., Marion, Va., purchased 10-acre site on which to build plant to manufacture tannic acid from chestnut oak; estimated cost \$150,000; use 50 to 100 cords chestnut oak daily.

Tenn., Clarksville—Ice Cream.—O. V. Garrison of Fayetteville, Tenn., will establish ice-cream factory.

Tenn., Kingsport—Chemicals. Dyes, etc.—Federal Dyestuff & Chemical Co., capital stock \$15,000,000, inceptd. and organized; Chrmn. Directors, A. B. du Pont of E. I. du Pont de Nemours & Co., Wilmington, Del.; V.-P.s, John C. Hebdon (new company's Chem. Engr. and formerly with Cassella Color Co., German dyestuff distributor), and Walter A. Guile, Jr.; Treas., Allison M. Archer of White & Co.; each of New York; offices at 39 Pine St., New York; has 26-acre site; begun construction buildings (first unit 75x70 ft.) in which to install machinery to manufacture sulphur black for dyeing cotton cloth, sulphuric acid, picric acid, benzol, etc.; proposes capacity 12,000 tons picric acid during 1916; report states has order for 500,000 lbs. sulphur black and that foreign government is negotiating for 1916 output picric acid. (Lately noted to build dye manufacturing plant, financed by New York capitalists, etc.)

Tenn., Nashville.—A. L. Hawkins will erect 2-story brick factory building; cost \$600.

Tenn., Nashville—Motion Pictures.—Oveca Motion Pictures Corp., 623½ Church St., lately noted inceptd., capital \$100,000, takes over Oveca (Tullahoma, Tenn.) Motion Pictures Co., removing plant from Oveca to Glendale Park Casino, Nashville; Harry F. Green, Pres. of new corporation; W. H. Wassman, V.-P.; A. P. Foster, Secy.; Harry F. Green, Manager.

Tex., El Paso—Automobile Tires.—J. T. Ward of Denver, Col., submitted proposition to El Paso Chamber of Commerce to establish automobile-tire factory; proposed to build plant in units, first unit to occupy minimum site of 100x120 ft.; plant ultimately to be 500x120 ft.

Tex., Texarkana—Tie Plates.—Morrison Tie Plate Co., capital \$4000, inceptd. by O. P. Morrison, John L. McWilliams and C. K. Rachel.

Va., Blacksburg—Millstones.—Brush Mountain Millstone Co. will install stone-cutting machinery, estimated cost \$2000, to manufacture millstones; capacity not yet known; building plans not matured; open machinery bids Dec. 1; D. R. Jones, Cambria, Va., Pres.; R. B. Shelor, Merrimac Mines, Va., V.-P.; V. C. Austin, Secy.-Mgr. (See Machinery Wanted—Stone-cutting Machinery.)

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Va., Bridge-water — Creamery.—Bridgewater Creamery & Ice Corp., capital \$15,000, chartered; W. H. Slpe, Prest.; O. D. Garger Secretary.
Va., Iron Gate—Slag Products.—Alleghany Slag Products Co., capital \$50,000, inceptd. to manufacture slag bricks, building blocks, etc.; E. S. Lackey, Prest.; F. F. Musgrove, Secy.
Va., Norfolk—Apple Cider Syrup.—Consumers' Brewing Co. will install plant to manufacture apple cider syrup; monthly capacity about 50,000 gals.
Va., Richmond—Printing Press Appliances.—Printing Press Appliances, Inc., capital \$15,000, chartered; J. R. Sheppard, Jr., Prest.; W. E. Green, Secy.—Treas.
Va., Richmond — Tubes.—Non-Collapsible Tube Corp., capital \$50,000, chartered; I. J. Marcuse, Prest.; Milton E. Marcuse, Secy.

MOTORS AND GARAGES

D. C., Washington—Motor Trucks.—Revelle Motor Truck Co., capital stock \$20,000, incorporated by Geo. F. Revelle, 489 G St. N. W.; Harry V. Lansdale and Robt. E. Buckley.
Fla., Fort Pierce—Automobiles.—Coats Auto Service Co., capital \$5000, inceptd.; J. G. Coats, Prest.; F. L. Hemmings, V. P.; Clara K. Platts, Secy.—Treas.
Ga., Atlanta—Assembling Plant.—Chevrolet Motor Co. of Flint, Mich., is reported as contemplating erection of assembling plant.
Ky., Glasgow — Service Garage.—Glasgow Motor Car Co. let contract to Ed. Ford, Glasgow, to erect 2-story, 70x127-ft. service garage, cost \$14,000; mill construction; composition roof; steam heat; electric lighting; plans by Fred Manley, Strand Theater Bldg., Lexington, Ky. (Previously noted.)
Ky., Harrodsburg — Service Garage.—Fort Harrod Garage Co. let contract to Walker Parsons, Harrodsburg, to erect 96x83-ft. fireproof service garage; cost \$10,000; composition (J-M asbestos) roof; steam heat; electric lighting; plans by Fred Manley, Strand Theater Bldg., Lexington, Ky.
La., Shreveport—Garage.—W. K. Henderson, Jr., owner Henderson's Garage, will enlarge garage.
Md., Baltimore—Garage.—Theo. W. Cooke, Homewood Ave. near Mt. Wilson Lane, has plans by J. S. Spedden, 1640 Hanover St., Baltimore, for garage at Maryland Ave. and 5th St.; 1-story; brick; 150x150 ft.
Md., Baltimore — Automobile Salesroom.—Walter Scott let contract to Jos. Schamberger, 2122 E. Baltimore St., Baltimore, to grade for auto sales building on St. Paul St. between Preston St. and Mt. Royal Ave.; 2 stories; 110x117 ft.; reinforced concrete and steel; composition roof; concrete floor; low-pressure steam; electric light; Sparklin & Childs, Architects, 401 Law Bldg., Baltimore. (Previously noted.)
Md., Baltimore—Garage.—Wm. H. Marcus of Marcus & Horkheimer, 525 Equitable Bldg., is having plans prepared by Smith & May, 1133 Calvert Bldg., Baltimore, for garage at Maryland and Mt. Royal Aves.; 77x85 ft.; 2 stories; brick and reinforced concrete; portion of space will be occupied by Monumental Motor Co.
Mo., Kansas City—Automobiles.—Willis Overland Co., Toledo, O., purchased site on which to erect 6-story building for branch plant.
Mo., Kansas City—Garage.—Prospect Center Garage Co., capital \$2000, inceptd. by John A. George, R. Conover and Hugh C. Smith.
Mo., Kansas City — Assembling Plant.—Chevrolet Motor Co. of Flint, Mich., is reported as contemplating erection of assembling plant.
Mo., Sedalia—Garage.—Sunny Side Garage Co., capital \$4800, inceptd. by P. R. Adams, Guy Gibson and Harry Nichols.
N. C., Salisbury — Garage.—Commercial Sales Corp., capital \$50,000, chartered by H. A. Rouzer, W. T. Rainey, Jr., and W. T. Rainey.
N. C., Wake Forest—Automobile Line.—Arrow Jitney Co., capital \$50,000, inceptd.; I. C. Yates, Prest.-Mgr.; W. P. Pollard, Winston-Salem, V. P.; E. P. Yates, 412 Wachovia Bank, Winston-Salem, Secy.; will operate automobile passenger line from Wake Forest to Raleigh. (See Machinery Wanted—Automobiles.)
N. C., Winston-Salem.—Arrow-Jitney Co., lately inceptd., capital \$50,000, will operate automobile line between Wake Forest and Raleigh. (See N. C., Wake Forest.)
Tenn., Chattanooga—Garage.—Hamilton Motor Car Co. has plans for garage and sales building for Hupmobiles; 70x145 ft.;

brick exterior; interior of concrete; main floor fireproof; upper floor partly fireproof and partly slow-burning construction; garage proper 70x120 ft. with plate-glass windows and concrete floor; building also to contain Hupmobile service station and general repair shop; upper floor for general garage purposes.
Tenn., Nashville—Garage.—C. M. Ferriss, Trustee, let contract Foster & Creighton Co. of Nashville to build reinforced-concrete garage at 1214 Broadway; estimated cost \$16,000. (Lately noted.)
Tenn., Nashville—Garage.—J. B. Palmer let contract Foster & Creighton Co., Nashville, to build reinforced-concrete garage; estimated cost \$75,000. (Lately noted.)
Tex., Dallas—Distributing Plant.—Studebaker Corp. of Detroit, Mich., is reported to build branch distributing plant.
Tex., Dallas—Assembling Plant.—Chevrolet Motor Co. of Flint, Mich., will erect assembling plant. (Chevrolet Motor V. lately noted inceptd. by W. S. Ballinger and others.)
Tex., Floresville — Garage.—Johnson & Moore will erect garage; 35x92 ft.; corrugated iron, with concrete floor.
Tex., Houston—Garage.—C. M. Malone of Bankers' Trust Co., San Jacinto and Walker Sts.; W. M. Rice and Wm. Malone will erect 2-story brick building; 125x70 ft.; mill construction; contract let to W. B. Zinky; Paige Auto Sales Co. will occupy 50x125 ft. on both floors.
Va., Newport News—Garage.—W. R. Shackelford and H. K. Shackelford will build garage.
Va., Richmond—Automobile Specialties.—Glant Specialty Corp., capital \$10,000, chartered; H. L. Gibson, Prest.; A. R. Holderby, Jr., Secy.—Treas.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Md., Port Covington.—Western Maryland Ry., H. R. Pratt, Chief Engr., Baltimore, has plans for boiler-house, screening shed, etc.; concrete foundations for main structure; corrugated iron and wood superstructures; bidders now estimating.
Miss., Clarksdale.—Yazoo & Mississippi Valley R. R., A. H. Egan, Gen. Supt., Memphis, Tenn., will build roundhouse; has let contract.
N. C., New Bern.—Norfolk Southern R. R. Co., F. L. Nicholson, Ch. Engr., Norfolk, Va., will let contracts to local contractors for lately-noted rebuilding of shops; loss on buildings amounted to about \$12,000 and damaged or destroyed 50x200-ft. brick machine shop, 30x30-ft. frame machine shop, 20x110-ft. woodworking shop and 4 stalls of engine-house; considerable machinery damaged or destroyed; replacement in charge of L. M. Jones, purchasing agent.

ROAD AND STREET WORK

Ala., Bay Minette.—Baldwin county will grade, drain and surface with sand-clay part of Eastern Shore Rd.; expenditure \$11,158.52; about 10 mi.; J. M. Garrett, Engr., Montgomery; County Commrs. receive bids until Dec. 14; W. S. Keller, State Highway Engr., Montgomery, Ala. (See Machinery Wanted—Road Construction.)
Ala., Dothan.—Houston County Board of Revenue, A. C. Crawford, Chrmn., is reported to have let contract Boyd & Bradshaw and Jordan & Phillips to construct graded roads to cost about \$100,000. (Call for bids lately noted.)
Ala., Gadsden.—Etowah County Highway Com. let contract W. J. Bradford & Co. to build 11 mi. of Walnut Grove Road from Ivalet.
Ala., Monroeville.—Monroe county will grade, drain and surface with gravel part of Old Federal Rd., beginning where State-aid road, to be let at same time, ends, and extending to Burnt Corn, through Monroeville to Hadley; County Board of Revenue receives bids until Dec. 27; P. W. Turner, County Engr. (See Machinery Wanted—Road Construction.)
Ala., Opelika.—Lee county will grade, drain and surface with sand-clay and topsoil part of Opelika and West Point Rd.; expenditure \$11,158.52; bids until Dec. 27; W. S. Keller, State Highway Engr., Montgomery, Ala. (See Machinery Wanted—Road Construction.)
Ark., Osceola.—Mississippi County, Osceola and Little River Road Improvement Dist. No. 1 will construct 2.5 mi. concrete road and 9 steel bridges; Commrs. receive bids until Dec. 1; Pride & Fairley, Engrs., Osceola, Ark.;

\$250,000 available; lately noted. (See Machinery Wanted—Road Construction.)
Ark., Pine Bluff.—C. M. Philpot, County Judge, approved formation of Road Improvement Dist. No. 12 of Jefferson county, which provides for improvement of 19 mi. of road north end of free bridge to Lonoke county line; probably macadam; Jesse R. Gore, C. H. Triplett, Jr., and Jeff Hicks, Commrs.; Humphreys & Tovey of Pine Bluff are Engrs.
Ark., Texarkana.—State Highway Dept., Hugh R. Carter, Engr., Little Rock, Ark., engaged Baum & Haynes, Engrs., Texarkana, to prepare preliminary plans and estimates for road from Texarkana to Garland City via Genoa; field work only to be by resident engineers; final plans and estimates to be prepared by Highway Dept.
D. C., Washington.—Dist. Commrs., 509 Dist. Bldg., let contract Warren F. Brenizer Co., 141 Q St. N. W., to construct 18th St. and Connecticut Ave. sewers, and Geo. Hyman, 301 16th St. N. W. (both of Washington), to construct Benning Road sewer main.
Fla., Arcadia.—De Soto County contemplates voting on \$46,000 road and bridge bonds. Address County Commrs.
Fla., Clearwater.—City let contract Pinellas Construction Co., Augusta, Ga., at \$22,806.72 to grade and pave with vitrified brick, including drains and inlets, Fort Harrison Ave. from Eldridge St. to corporate limits.
Fla., De Land.—Volusia County, Special Halifax Road and Bridge Daytona Dist., issued \$400,000 road and bridge bonds; S. D. Jordan, Clerk County Commrs.
Fla., Fellsmere.—City, Wallace Sherwood, Secy. Commrs., let contract to E. Hawk to construct 5½ mi. concrete sidewalks. (Lately noted.)
Fla., Fort Pierce.—St. Lucie County Commissioners let contract Good Roads Construction Co., Memphis, Tenn., for asphalt-surfacing 4½ mi. Dixie Highway along Indian River from Fort Pierce to White City Rd., south.
Fla., St. Petersburg.—City will extend and pave with brick 8th Ave. north to new seawall. Address The Mayor.
Fla., Tallahassee.—City votes Dec. 28 on \$4000 bonds to pave College Ave. from Adams to Copeland St.; D. M. Lowry, Mayor; A. H. Williams, City Clerk.
Fla., Tampa.—City will pave certain streets with asphalt blocks. Address The Mayor.
Fla., Tampa.—City will construct sheet cement sidewalks in Oseawana Subdivision on Fremont Ave.; Board of Public Works, D. B. McKay, Chrmn., receives bids until Dec. 7. (See Machinery Wanted—Paving.)
Fla., Tampa.—City will repair North Boulevard from Grand Central Ave. to brick pavement in front of Gordon Keller Hospital and construct driveway to Gordon Keller Hospital; Commrs. of Public Works, S. C. McKay, Chrmn., receive bids until Dec. 7. (See Machinery Wanted—Road Construction.)
Fla., Tampa.—City will construct asphalt-block pavement; South Dakota St., Snow to Bayshore Blvd., macadam base and stone asphalt surface, 20 ft. wide, concrete curb; Brevard St., Bay St. to Swann Ave., 20 ft. ft. wide with asphalt block; Nance Ave., Bayshore Blvd. to Hills Ave., 20 ft. wide with asphalt block; concrete curb on Brevard Ave. from Azelle St. to Swann Ave.; 10th Ave. from Florence to Tenth St., 24 ft. wide, asphalt-block paving and cement curb.
Ga., Savannah.—Savannah Motorcycle Club is preparing plans for construction 1-mi. motor speedway.
Ky., Albany.—Clinton county will construct 22 mi. water-bound macadam road; Clinton County Fiscal Court, C. B. Parrigin, Chrmn., received bids until Nov. 30; F. S. Parrigin, Engr., Albany; also invites bids for leaning wheel grader, gasoline roller having pressure of 250 lbs. per in.; 9x16-in. jaw crusher, with screen in 3 sections; portable gasoline engine of 16 H. P. with connections and tank for air reservoir with which to operate rock drill, air-driven rock drill, 6-wheel scrapers and 5 scrap scrapers; lately noted. (See Machinery Wanted—Road Construction and Machinery.)
Ky., Harboursville.—Knox County Fiscal Court approved plans for cross-country highway route from Flat Lick, near Bell county border, to Corbin, on Laurel county border.
Ky., Lexington.—Fayette County Fiscal Court let contract Carey-Reed Co. of Lexington to pave with asphaltic concrete Lexington-Nicholasville Pike; 2½ mi. standard Mexican asphalt and 1 mi. Trinidad asphalt; also let contract Jas. H. Young to reconstruct final 1½ mi. with tarvia; estimated

total cost, \$6000 to \$7000 per mi.; State aid; F. A. Bullock, County Judge; R. W. Davis, County Engr. (Call for bids lately noted.)
La., Covington.—St. Tammany parish Police Jury let contract Henry Keller, Slidell, La., to maintain 175 mi. roadways, bridges, etc.; C. R. Schultz, Parish Road Supvr.
La., Oakdale.—City let contract De Jersey & Naff of Delidder, La., to construct 3 mi. cement sidewalk.
Md., Cumberland.—City will pave Cumberland St. from Allegany to Franklin St. with Queen City brick, and from Franklin to Tighman St. with concrete; Jas. P. Gaffney, City Engr.
Md., Leonardtown.—Commrs. of Leonardtown, St. Mary's county, let contract Austin & Ireland, P. O. Box 356, Baltimore, to construct 1.18 mi. State-aid highway on Washington and Fenwick Sts.; graded to width of 24 ft.; graveled, 14 ft. (Call for bids lately noted.)
Mo., Bolivar.—Polk county, Bolivar Special Road Dist., voted \$25,000 bonds for roads and culverts; about 10 mi. proposed; G. M. Upton, Secy. County Highway Comm. (Lately noted.)
Mo., Bolivar.—Polk county, Bolivar Special Road Dist., voted \$25,000 bonds for road improvements; part of issue to be expended on improvement of Osage Valley highway connecting Springfield and Kansas City.
Mo., Independence.—Jackson County Commissioners let contract National Paving Co. of Kansas City, at \$14,715, to pave 1 mi. of road.
Mo., Lexington.—Lafayette county, Waverly Special Road Dist., voted \$49,000 bonds to construct rock road on Old Trails Road from Kansas City to St. Louis. Address County Commrs. (Lately noted.)
Mo., Marshall.—Saline county will vote in Jan. on \$1,310,000 bonds to rock total of 192.20 mi. of roads; John C. Wonders, Ch. Engr. of office of good roads of Dept. of Agriculture, submitted estimates based on macadam surface 15 ft. wide for principal roads, 102.8 mi., and 9 ft. for secondary roads, 89.4 mi., with depth of 8 in. in center and 6 in. at side; all culverts of concrete. Address County Commrs. (Lately noted.)
Mo., Monett.—City let contract M. E. Gilloz, 708 Euclid Ave., Monett, at \$6000, to construct oiled macadam paving on Frisco Ave.
Mo., Springfield.—City let contract Plummer-Adams Co., at about \$13,500, to pave Boonville St. from Division to Pine St. and for 2 ft. on either side of Springfield Traction Co.'s rails.
N. C., Asheville.—Buncombe County Commissioners are reported to have \$2000 available to construct its portion of scenic automobile highway from point on Asheville-Charlotte highway to base of Chimney Rock.
N. C., Dobson.—Surry county, Westfield township, let contract to C. C. Jordan, Birmingham, Ala. (present location Mt. Airy, N. C.), at \$25,000 for grading and topsoiling; same contractor is completing \$15,000 grading and topsoiling contract in Dobson township, and proceeding with road grading, etc., in Shoals township, cost \$25,000. (Previously noted.)
N. C., Danbury.—Stokes county, Yaddin township, defeated \$50,000 bonds to construct roads. (Lately incorrectly reported as voted.)
N. C., Lincolnton.—City let contract Noll Construction Co. of Chattanooga, Tenn., to construct cement sidewalks; County Commrs. let contract to same company to build cement walks through Court Sq.
N. C., Marion.—McDowell County Commrs. are reported as considering \$5000 bond issue for road construction.
N. C., Snow Hill.—Greene County Commrs., J. C. Exum, Chrmn., will construct sand-clay roads to amount of \$32,500; bids until Dec. 6. (See Machinery Wanted—Road Construction.)
Okla., Ringling.—City will grade streets and build sidewalks. Frank L. Ketch, Mayor.
Okla., Claremore.—Rogers county, Collinsville dist., voted \$30,000 bonds and Verdigris dist. \$50,000 bonds for road construction. Address County Commrs. (Lately noted.)
S. C., Gaffney.—City will pave North Limestone St. to railroad; also considering paving Granard St. from Frederick to Robinson St. and Robinson St. from Granard to Limestone St. Address The Mayor.
S. C., Greenwood.—City let contract to Case & Cothran, 1557 Candler Bldg., Atlanta, Ga., to construct 100,000 sq. yds. concrete and brick paving; \$175,000 available; C. P. Ballenger, City Engr. (Bids lately noted.)
Tenn., Chattanooga.—City let contract Southern Paving & Construction Co. of Chat-

tanooga at \$5277 to pave Chestnut St. from 9th to 10th St., Paying Dist. No. 167, with cream-colored wood blocks; E. D. Bass, Commr. (Call for bids lately noted.)

Tenn., Cleveland.—City will pave streets; \$65,000 available. Address The Mayor.

Tenn., Knoxville.—Knox county will rebuild Kingston Rd. from corporate limits of city of Knoxville to Eastern Insane Asylum, 1 mi., on Sevierville Rd. and 1 mi. on Broadway Rd.; Good Roads Com. invites bids until Dec. 15; bids on concrete, tarvia and macadam (hot mixed and penetrating) asphalt or other suitable material for permanent roads. (See Machinery Wanted—Road Construction.)

Tenn., Knoxville.—Knox County Road Com. let following contracts for road construction aggregating \$100,000: Donovan, Daugherty & Taylor—Sections of Emory and Solway Roads and Sutherland Ave.; C. P. Hood—Sections Lovell and Kingston Roads; Monday Bros.—Sections of Island Home, Maryville, Millertown and Dandridge Roads; also advertised for bids to construct 3 mi. roads, 1 mi. on Kingston, Sevierville and Broadway Pike, respectively; with these appropriations nearly all of \$500,000 provided for in good roads bond issue has been placed.

Tenn., Memphis.—City plans to construct parkway encircling entire city; 200 ft. wide, part of which will have double drives; Ben A. Adams, Park Engr., is preparing plans for first section, 3-16 mi. long, from Riverside Park to Forest Hill Cemetery.

Tenn., Murfreesboro.—Rutherford county votes Dec. 14 on purchase of roads; plans to issue \$150,000 bonds. Address County Commrs.

Tex., Batesville.—Zavalla County, Road Dist. No. 3, voted \$40,000 bonds to construct roads. Address County Commrs. (Noted in Oct.)

Tex., Austin.—City let contract Texas Bitulithic Co. of Dallas to pave 1st St. from Congress Ave. to Chicon St. and Red River St. from 6th to 16th St.; total 50,000 sq. yds.; bitulithic; this is first contract for street paving to be provided for out of \$750,000 bond issue; P. W. Powell, Commr. of Sts. (Lately noted.)

Tex., Boston.—Bowie County Commrs. voted to appropriate \$20,000 to build and extend roads in Precinct No. 1, in which Texarkana is located.

Tex., Dallas.—City Commrs. let contract Vibrolithic Co. of Dallas at \$7550 to pave Bryan Parkway from Greenville Rd. to Munger Blvd.

Tex., Dallas.—Dallas county will surface Dallas-Garland Rd. for 2 mi. near Garland; gravel; Chas. E. Gross, County Auditor, receives bids until Nov. 29. (See Machinery Wanted—Road Construction.)

Tex., Eagle Lake.—City, E. L. Mooney, Mayor, let contract to F. E. Boethe to gravel streets; about 15,000 cu. yds. gravel; \$12,500 available; A. F. Mitchell, Engr.

Tex., Galveston.—City will vote on \$75,000 bonds as follows: \$25,000 to pave, drain and improve streets; \$200,000 to repair, restore or submerge water mains across Galveston Bay; \$300,000 to restore, repair, fill, grade, pave, drain and improve streets, sidewalks, etc., damaged in Aug. storm; \$125,000 to fund debt and pay cost of repairing and restoring streets and avenues, water-works, electric lights and other public property and remove debris from streets following Aug. storm. A. T. Dickey, City Engr.

Tex., Hillsboro.—City contemplates vote on bonds to pave Franklin St. with rock asphalt on concrete base. Address The Mayor.

Tex., Livingston.—City let contract J. G. Browne Co. of Houston, Tex., at \$27,500 for street improvements; gravel principal streets; 7½ mi. grading on cross streets; complete drainage system; 7 concrete and steel bridges; 2000 ft. corrugated iron culverts.

Tex., Lockhart.—Caldwell county contemplates voting on \$50,000 bonds to construct its portion of central route of Southern national highway. Address County Commrs.

Tex., Lufkin.—Angelina county, Lufkin Dist., will vote on \$200,000 bonds to construct roads. Address County Commrs.

Tex., Sweetwater.—Nolan county votes Dec. 18 on \$100,000 bonds to construct roads. Address County Commrs.

Va., Lynchburg.—City will construct granolithic sidewalks; 500 sq. yds. sidewalks and 200 cu. yds. excavation; bids opened Nov. 27; H. L. Shaner, City Engr.

Va., Richmond.—Administrative Board invites bids to place granolithic curbs and gutters and to grade and gravel Riverside Drive from Gamble's Hill, near Arch and 2d Sts., to Riverside Park; this is first section of driveway, which will later be extended

along edge of Hollywood Cemetery to William Byrd Park and pumphouse and finally to settling basins; first section to be completed with \$25,000 appropriation; Chas. E. Bolling, City Engr. (Lately noted.)

W. Va., Charleston.—Kanawha County Commrs. let contract Atlantic Bitulithic Co., Richmond, Va., at \$36,855.72 to construct section of Sissonville Road in Poca Dist.

SEWER CONSTRUCTION

Fla., Jacksonville.—Sewer Committee of Board of Bond Trustees and Paving and Sewerage Com. of City Council decided upon plans for expending \$375,000 bond issue to construct sewers and drains, using money to be available under sale of bonds this year and next; agreed to expend \$154,000 for drains, \$134,000 for sewers and \$86,310 for Stonewall St. outfall and laterals. Geo. M. Powell, Chrmn. Bond Trustees. (City noted in Sept. to have voted \$375,000 bonds for sewerage and drainage.)

Ga., Lumpkin.—City contemplates constructing sewer system; will probably engage W. M. Crook, Engr., Macon, Ga., to prepare plans and estimates; W. G. Pugh, Mayor.

Ga., Macon.—City let contract H. B. Hoppendtzel at \$1,853.65 to construct sanitary sewer in Cherokee Heights.

La., De Ridder.—City retained Xavier A. Kramer, Magnolia, Miss., as consulting engineer for sewer system in First Sewer Dist.

Md., Baltimore.—City will construct lateral sewers in Dist. No. 35-A, Sanitary Contract No. 172; \$500 lin. ft. 8-in. to 12-in. vitrified-pipe sewer and 2500 lin. ft. vitrified-pipe house connections; Board of Awards, City Hall, receives bids until Dec. 8; Chas. England, Chrmn. Sewerage Com. (See Machinery Wanted—Sewer Construction.)

Md., Crisfield.—City will construct about 8 mi. sewers and disposal plant; open construction bids about March or April; Engrs. Greiner & Whitman, 1319 Fidelity Bldg., Baltimore, Md. (Lately noted.)

Md., Hagerstown.—City contemplates constructing sewer system; J. McPherson Scott, Mayor; J. B. Ferguson, City Engr.

N. C., Winston-Salem.—Granville Development Co. is reported as contemplating construction of 2500 to 3000 ft. sewers in Granville development, West Salem.

Tenn., Cleveland.—City let contract A. C. Brooks & Co., Birmingham, Ala., at \$44,000 to construct 16½ sewers of 20 to 8-in. diam. and Concrete Construction Co., Birmingham, Ala., at \$19,600 to build 2 concrete septic tanks; \$75,000 appropriated; Walter G. Kirkpatrick, Engr., 704 Farley Bldg., Birmingham, Ala., to supervise construction. (Call for bids lately noted.)

Tenn., Nashville.—City will construct 18-in. clay pipe trunk sewer with catch-basins, manholes, connections, etc., from and connecting with trunk sewer in 4th Ave. at Cedar St. and extending to point near 5th Ave. North; bids until Nov. 30; J. W. Dashiell, Secy. Commrs. (See Machinery Wanted—Sewer Construction.)

Tex., Belton.—City voted \$40,000 bonds for sewer and water-works improvements. Address The Mayor.

Tex., Childress.—City contemplates installation of sewer system. Address The Mayor.

Tex., Denton.—City will extend sewer system 1 mi.; W. L. Foreman, Mayor, invites bids on piping.

Tex., Fort Sam Houston.—Govmt. will construct sewerage system and disposal plant; Constr. Quartermaster receives bids until Dec. 14. (See Machinery Wanted—Sewer Construction.)

Tex., Houston.—City will construct storm sewer on Paschal St. from North Main to Cochran St. with laterals and appurtenances; storm sewer at White Oak and Florence Aves.; Burnett St. storm sewer system and outfall for Caroline St. storm sewer and other work on said sewer; City Secy. receives bids until Dec. 4; Ben Campbell, Mayor. (See Machinery Wanted—Sewer Construction.)

Tex., Palestine.—City Commrs. will purchase present sewer system or construct new one. Geo. A. Wright, Mayor.

Tex., Seguin.—City is considering installation of sewerage system; will vote on \$40,000 bonds; Chas. Bruns, Mayor.

Tex., Winnsboro.—J. D. Carter, Dallas, Tex., submitted proposition for installation of municipal sewer system.

TELEPHONE SYSTEMS

Ky., Lexington.—Fayette Home Telephone will erect additional story to exchange.

Okla., Hobart.—Everett Telephone Co. inceptd. by J. H. Peck of Hobart, D. K. Knepper and E. M. Stringer of Roosevelt, Okla.

Okla., Bernice.—United Telephone Co. will rebuild telephone exchange reported burned.

Tex., Ozona.—Ozona Telephone Co. increased capital stock from \$15,000 to \$25,000.

TEXTILE MILLS

Ala., Sylacauga.—Cotton Yarn.—Avondale Mills, Birmingham, will build (with own force) 168x132-ft. 2-story brick addition to Eva Jane Mills; install about 4000 spindles with preparatory machinery for spinning, winding and twisting coarse yarn; has purchased equipment. (Lately mentioned.)

Ga., Gainesville.—Hosiery.—B. H. Merck will establish knitting mill with daily capacity 100 doz. pairs hose. (Lately noted.)

Miss., Moorhead.—Cotton Duck.—Mississippi Cotton Mills Co. is reported as planning to build addition mill, to manufacture tire duck.

Mo., St. Louis.—Bleachery.—Lowell Bleachery, Lowell, Mass., contemplates early construction, by stockholders, of plan for large permanent branch plant; unconfirmed report states will build 3-story and basement brick structure and equip with machinery for monthly capacity 250,000 lbs. dyed and finished cotton cloth; estimated plant cost \$200,000; P. W. Kernan is Supt. at St. Louis. (Previously mentioned.)

N. C., Edenton.—Hosiery.—W. J. Berryman may establish hosiery knitting mill. (See Machinery Wanted—Knitting Machinery, etc.)

N. C., Franklinville.—Bag Cloth, etc.—Franklinville Mfg. Co. will install about 3000 spindles and 50 looms additional to present equipment; now erecting building for this installation; manufactures seamless bag cloth, chain warps, etc.

N. C., Tarboro.—Hosiery.—Runnymede Mills No. 2 authorized issue of \$12,000 stock to purchase Wah Reh Hosiery Mills.

S. C., Union.—Cotton Cloth.—Monarch Cotton Mills will add about 11,000 spindles, 325 looms and accompanying machinery in present buildings; J. E. Sirlene, Greenville, S. C., Archt. Engr. in charge. (Lately noted to add 11,000 spindles, etc.)

Tenn., McKenzie.—Southern Textile Co., capital \$10,000, inceptd. by W. A. Young, V. C. Wrinkle, R. E. Moore and others.

Tenn., South Pittsburg.—Hosiery.—Aycock Hosiery Mills (New York office 377 Broadway) will expend \$9000 on building and machinery to increase dye-house facilities; dyeing machinery, for American dyestuffs, to have daily capacity 1200 dozen pairs hosiery. (Building contract 1-story brick 50x40 ft.—lately noted let to V. W. Crumbliss.)

Tenn., Shelbyville.—Knit Underwear.—Robinson-McGill Mfg. Co. (now manufacturing harness) will establish mill to knit men's heavy ribbed underwear; daily capacity 100 doz.; use No. 9½ single hosiery yarns on cones; has building for machinery installation. (See Machinery Wanted—Knitting Equipment.)

WATER-POWER DEVELOPMENTS

Ala., Florence.—Lauderdale Power Co. awarded contract to Allentown Engineering Co., Hugh G. Stokes, Engr., Florence, to construct hydro-electric plant costing \$127,553; plant to include dam 410 ft. long with 190-ft. spillway and 42-ft. lift; develop 800 primary and 100 secondary h. p.; transmit electricity for local manufacturing enterprises; this waterpower development lately mentioned (See Machinery Wanted—Electrical Machinery, Etc.)

Md., Baltimore.—Pennsylvania Water & Power Co., Chas. E. F. Clarke, Pres., U. S. Fidelity & Guaranty Bldg., may possibly install (within next year) 2 additional units at its hydro-electric plant, McCall's Ferry, Pa., on Susquehanna River, now developing 112,000 H. P. for electrical distribution to Baltimore; 2 additional units will increase this to about 145,000 H. P.

WATER-WORKS

Ala., Gadsden.—Gulf States Steel Co., Birmingham, Ala., is reported to construct waste-water reservoir and install high-pressure fire pump at plant; estimated cost \$15,000.

Ga., Lumpkin.—City contemplates consolidating water-works and electric-light plant, now about 1 mi. apart; proposes to remove water-works to present location of electric-light plant; this will require drilling deep well and building concrete reservoir; W. M.

Crook, Engr., Macon, Ga., is preparing estimate of cost; W. G. Pugh, Mayor.

Ky., Winchester.—City Council appointed committee to investigate purchase of present water-works and have estimates prepared for extending system to river. D. T. Matlack, Mayor.

La., De Ridder.—City retained Xavier A. Kramer, Magnolia, Miss., as consulting engineer for water system.

La., Donaldsonville.—Municipal Light and Water Com. received proposition from Grant Hornaday, Gen. Mgr. National Water Purification Co. of Dallas, Tex., providing for erection of 2 supply basins with capacity of 100,000 gals. each, giving total of 200,000 gals. water available for immediate use.

La., Oakdale.—City water-works plans will be ready in about 30 days; Xavier A. Kramer, Engr., Magnolia, Miss.; S. A. Pittman, Chrmn. and R. E. L. Ricketts, Secy. of Com. (Lately noted; estimated cost \$25,000.)

La., White Castle.—City, H. S. Batta, Mayor, let water-works contracts: Pipe to American Cast Iron Pipe Co., Birmingham, Ala.; tank and tower, Chicago Bridge & Iron Works, Chicago; engines and pumps, Fairbanks, Morse & Co., Chicago; hydrants and valves, Columbian Iron Works, Chattanooga, Tenn. (Bids lately noted.)

Md., Somerset.—Somerset Heights Water & Power Co. plans issuing bonds for improvement and extension of water system.

Okla., Tulsa.—City postponed date of election from Nov. 23 (as lately stated) to Jan. 2 to vote on \$600,000 bonds to construct reservoir at mouth of Shell Creek, etc. Address City Com.

Tex., Belton.—City voted \$40,000 bonds for water-works and sewer improvements. Address The Mayor.

Tex., Denton.—City will extend water-works; 4000 ft.; W. L. Foreman, Mayor, invites bids on piping.

Tex., Fort Worth.—Holman & Laird, Consulting Engrs., St. Louis, Mo., submitted final report of survey of water-works, recommending \$300,000 bond issue for completion of Lake Worth conduit, enlargement of filter plant and overhauling distribution system; estimated cost divided as follows: \$112,000 to complete conduit, \$86,000 to enlarge filter plant, \$16,500 to build additional levees around Holly pumping station, \$25,000 to repair Holly plant pumping engines and \$30,000 to construct 12-in. connection to North Side; total, \$263,500, not including about \$40,000 necessary to complete dual system of pipe distribution and to move centrifugal unit from south side plant to Nutt power plant, placing it on dual service system. (Lately noted.)

Tex., Galveston.—City will vote on \$300,000 bonds to repair, restore or submerge water mains across Galveston Bay. (See Road and Street Work.)

Tex., Galveston.—City will construct submerged 30-in. cast-iron water main across part of Galveston Bay; about 9108 ft. long; City Commrs. receive bids until Dec. 9; A. T. Dickey, City Engr.; plans lately noted. (See Machinery Wanted—Water Main.)

Va., Newport News.—Newport News Light & Water Co., W. B. Livezey, Pres., contemplates installing new 24-in. supply line from Reservoir No. 1, located 16 n.e. west of Newport News, and is arranging for immediate laying of 5 mi. of proposed pipe, from reservoir toward Oyster Point; has ordered all material; construction by the company; estimated cost of the 5 mi. main about \$125,000.

WOODWORKING PLANTS

Ark., Fort Smith.—Wagons.—Fort Smith Wagon Co. will increase capacity.

Ark., Higginson.—Boxes.—W. C. Racey, W. B. Poddis and A. W. Vincent let contract Goodrich & Essex to build box factory.

Ga., Atlanta.—Pencils.—National Pencil Co. will improve and enlarge plant.

Ky., Elizabethtown.—Handles.—Bond Bros. will build handle factory.

Ky., Louisville.—Veneer.—Hoosier Veneer & Panel Co., New Albany, Ind., had plans by and let contract to L. V. Abbott, Louisville, to erect 42x80-ft. fireproof building for lately-noted plant; cost about \$40,000; will install wood-working machinery, cost \$25,000; product, built-up veneer; capacity 20,000 sq. ft. daily; address machinery proposals to S. E. Stout, New Albany.

La., Monroe.—Staves.—Ouachita Stave Co., S. B. Meeks, Pres., and S. W. Brown, Mgr., acquired plant of Brown Stave Co. (Lately noted inceptd., capital \$6000.)

Md., Baltimore.—Boxes.—Hill & Mount of Newark, N. J., leased building at 12-18 East

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ave. containing 35,000 sq. ft. and will
equip as box assembling plant; will pur-
chase small amount of equipment.

Miss, Columbus—Wash Ribs.—Tennessee &
Mississippi Mfg. Co., Jas. A. Fuson, Prest.,
plans to establish plant to manufacture pat-
ented washtubs with board.

Miss, McComb—Boxes, etc.—Hinton Mfg.
Co., capital \$10,000, incptd. by J. H. Hinton,
E. R. Hinton, H. E. Hinton and Irene Hin-
ton.

Mo., St. Louis—Furniture.—Blackmore Bed-
ding Co. will manufacture furniture in addi-
tion to present output of box springs and
mattresses. (See Miscellaneous Factories.)

N. C., Lincolnton—Furniture.—Lincolnton
Furniture Mfg. Co. is reported to double
capacity of furniture factory.

N. C., Warsaw—Tobacco Trucks, etc.—
John Bowden will rebuild carpenter shop
and tobacco truck factory lately noted
lately; to be occupied by A. W. Newcomb;
2500 ft.; frame building with composition
roof.

Tenn., Clarksville—Carriages.—Robinson-
McGill Carriage Co. of Nashville, Tenn., will
erect 2-story brick building to be occupied
by Clarksville Buggy Co., subsidiary of Rob-
inson-McGill Co.; later may decide to erect
3-story building.

Tenn., Fayetteville—Carriages.—W. C. and
J. Moore will establish carriage factory;
purchased equipment; erecting building.

Va., Charlottesville—Boxes, etc.—Char-
lottesville Box & Casket Co., capital \$15,000,
incptd.; C. P. Harman, Prest.; L. J. Har-
man, Secy.

Va., Dendron—Box Shooks.—Surrey Lumber
Co., 902-907 Union Trust Bldg., Baltimore,
Md., will rebuild box-shook mill lately noted
lately; mill-construction building, about
100,000 ft.; cost \$30,000; no contract; ma-
chinery mainly purchased; cost \$40,000 to
\$50,000; manufactures box shooks; daily
capacity about 100,000 ft.

Va., Martinsville—Furniture.—American
Furniture Co., A. D. Witten, Prest. (lately
noted increasing capital stock from \$200,000
to \$500,000), has fully equipped plant; will
build additional storage; new building, to
cost \$25,000, of ordinary brick; sprinkler sys-
tem; no contract; machinery has been or-
dered; company doubled main factory last
year.

Va., Port Norfolk—Box Shooks, Etc.—South
Hill Mfg. Co., South Hill, Va., will open bids
after Jan. 1 to construct lately noted addi-
tional building for recently purchased plant;
will erect 100x240-ft. wood structure; install
woodworking and box mill machinery; date
of receiving machinery bids not set; will
manufacture box shooks and dressed lumber;
daily capacity 100,000 to 125,000 ft.

FIRE DAMAGE

Ala., Anniston.—Boozor Trading Co.'s store
building, owned by Mrs. Constantine of Ox-
ford, Ala.; loss about \$40,000.

Ala., Fort Deposit.—J. L. Parrish's resi-
dence on W. Pollard St.

Ala., Goshen.—City Drug Store, operated
by J. H. Holiday and owned by Mrs. Wal-
ters, Glenwood, Ala.; Alfred Simmons' bar-
ber shop; J. W. Coston's store; G. B. How-
ard's stores.

Ala., Montgomery.—P. T. Brannon's apart-
ment-house at 30 Cleveland Ave.; J. C. Rob-
ertson's residence at 26 Cleveland Ave.

Ala., Union Springs.—Union Springs Cot-
ton Co.'s plant and 700 bales cotton; South-
ern Cotton Oil Co.'s mill and guano factory;
Birmingham & Southeastern Ry.'s depot and
6 passenger coaches; total estimated loss
\$100,000; E. S. McDaniel, Supt., Union
Springs, Ala.

Ark., Althelmer.—Judge T. M. Phillips'
residence; loss \$30,000.

Ark., Douglas.—Hargis-Hall Planting Co.'s
commissary; loss \$20,000.

Ark., Little Rock.—Melville Tent Theater
at 17th and Main Sts., owned by Bert Mel-
ville; loss \$9000.

Ark., Moscow.—Dr. J. F. Hillburn's resi-
dence, owned by M. W. Ware, Pine Bluff, Ark.

Ark., Pine Bluff.—Pine Bluff Compress
Co.'s warehouse; loss on cotton, \$1,250,000.

Ark., Searcy.—E. A. Robbins' residence on
W. Arch St.; loss about \$10,000.

Fla., Gainesville.—Tucker's Ginnery; esti-
mated loss \$15,000.

Fla., Graceville.—Dr. W. B. Williams' resi-
dence.

Fla., Tarpon Springs.—Geordadis Bldg. on
Saard Ave., owned by Geordadis Bros.

Ga., Augusta.—Interstate Cotton Oil Co.'s
seedhouse; estimated loss \$175,000.

Ga., Columbus.—Guy Garrard's residence on
Wildwood Circle; loss \$4000.

Ga., Commerce.—Hotel Commerce, owned
by H. O. Williford; loss \$8000.

Ga., Eastman.—Trio Cotton Oil Mill; loss
\$215,000.

Ga., Ellenton.—J. M. Livingston's residence
near Ellenton.

Ga., Sandersville.—L. M. Lucas' residence.

Ky., Cynthiana.—W. B. Elder's residence at
Oddville; loss \$3000.

Ky., Grayson.—High School. Address
School Trustees.

Ky., Hickman.—Mrs. Sudie Julian's resi-
dence; J. P. Leggate's residence; Leggate
Livery Co.'s stable; Jas. Naifeh's barn.

Ky., Holt.—Mrs. Virgil Hardin's residence;
loss \$3250.

Ky., Louisville.—T. A. C. Toque's residence
at 1417 Goddard Ave.; loss \$5000.

Ky., Louisville.—W. A. Hubbard's resi-
dence at 33d-St. entrance to Jacob Park;
Geo. Bruen's bungalow; loss \$8000.

Ky., Middlesburg.—Wm. Fogle's residence.

Ky., Paducah.—Fooks Lumber Co.'s plan-
ing mill; loss \$15,000 to \$18,000.

La., Basile.—John Chaumont's 2 buildings
on Lewis Ave.; loss \$6000.

La., Delhi.—Mrs. F. Garley's store and
dwelling, about 5 mi. from Delhi.

La., Lake Charles.—H. E. Buck Brick Mfg.
Co.'s lumber mill and brickyard; estimated
loss \$10,000.

Md., Baltimore.—Parkway Garage, Chapel
Rd. and Roland Heights Ave., was but slight-
ly damaged by recently noted fire; needs no
new installation.

Md., Cumberland.—Barnard Cutter's saw
mill.

Md., Mayfield.—Henry Klachus' residence
on Foley Farm near Mayfield; loss about
\$5000.

Miss., Meridian.—Heldberg Inn, on 8th St.,
between 23d and 24th Sts.; loss \$10,000.

Miss., Meridian.—B. F. Hyde's bakery; es-
timated loss \$5000.

Miss., New Albany.—Rainey Hotel, owned
by Paul J. Rainey, New York, loss \$8000;
Merchants and Farmers' Bank; Rogers Drug
Co.'s store; Goodman Pharmacy; Smith
Mercantile Co.'s store; Morris Hardware
Co.'s store; Craig Bros.' store; Wiseman
Mercantile Co.'s store; total loss \$150,000.

Miss., Starkville.—Dr. B. L. Magruder's
residence.

Miss., Wiggins.—J. P. Clendenin's resi-
dence; Hutto Hotel.

Mo., Pittsburg.—Orpheum Theater, loss
\$49,000; W. H. Braden's livery barn, loss
\$10,000.

Mo., Tarkio.—Tower of main building of
Tarkio College; loss \$10,000.

N. C., Dana.—Elbert Pace's residence.

Okl., Bernice.—Beck Bros.' livery barn;
United Telephone Co.'s offices and L. P.
Conner's store.

Okl., Beggs.—Kimball & Reading's build-
ing; H. George's bakery; W. M. Snyder's
store; H. D. Seymour's building.

Okl., Duncan.—W. H. Pemberton's farm
residence, near Duncan.

N. C., Magnolia.—F. D. Scott's residence;
loss \$3000.

Okl., Marshall.—William Estes' residence.

S. C., Anderson.—W. J. Horn's barn.

S. C., Charleston.—Woodstock Hardware
& Spool Mfg. Co.'s plant; loss \$25,000.

S. C., Summit.—Fred G. Hartley's turpen-
tine distillery.

S. C., Sumter.—O'Donnelle & Co.'s store,
loss \$12,000; Mrs. Ella Toumey estate's
building.

Tenn., Nashville.—Goldstein & Co.'s store;
loss \$5000.

Tenn., Paris.—Ed. Blanton's residence at
Chicksaw.

Tenn., Shelbyville.—James Stewart's resi-
dence, owned by R. L. Joyce.

Tex., Ballinger.—Harwell Motor Co.'s
building; loss \$30,000.

Tex., Brenham.—Gus Schumacher's resi-
dence; loss \$5500.

Tex., Celeste.—R. A. Brougber's residence,
owned by Anson Cunningham, Farmersville,
Tex.

Tex., Cleburne.—Mrs. Hurley's residence, at
711 N. Anglin St., occupied by Mrs. Nora
O'Brien.

Tex., Cleburne.—T. O. Crowder's residence
at 908 S. Caddo St.; owned by J. H. Happel.

Tex., Denton.—Joe Stenbergen's residence
on N. Locust St.; loss \$3500.

Tex., Dallas.—Charles Barry's residence at
1820 Masten St.; loss \$3500.

Tex., Dallas.—Dr. H. M. Doolittle's resi-
dence, J. W. Lindsley & Co., Agts.; loss
about \$4000.

Tex., Denton.—Methodist Protestant
church; loss \$4000. Address The Pastor.

Tex., Fort Worth.—S. E. Walker's barn,
owned by W. J. Boaz.

Tex., Edna.—Sheet warehouse of D. Jame-
son & Co. and N. N. McDonald.

Tex., Henrietta.—M. B. Brazil's residence,
2 mi. from Henrietta; loss \$3000.

Tex., LaGrange.—G. Brandes' residence;
loss about \$3000.

Tex., Lockhart.—Lockhart Oil Mill, con-
trolled by D. M. Day; estimated loss, \$40,000.

Tex., Mineral Wells.—The Terrace, owned
by Mrs. Elizabeth Holmes, loss \$8500; Lelper
House, owned by Mrs. M. A. Lelper, loss
\$23,000.

Tex., Omaha.—J. Estus Porham's residence.

Tex., Paris.—W. A. Ryan's residence; loss
\$5000.

Tex., Paris.—Dwelling owned by Connor
estate.

Tex., Paris.—Paris Milling Co.'s main
building of plant and equipment; loss \$30,000
to \$40,000.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

D. C., Washington.—Bates Warren, 406
Southern Bldg., has plans by Hunter & Bell,
411 Southern Bldg., Washington, for apart-
ment-house at Belmont and Columbia Rds.;
site 135x128 ft.; building 7 stories; concrete;
rough-texture brick exterior; refrigerating
plant; vapor heat; work reported to begin
immediately.

Ga., Savannah.—Masonic Temple Assn. will
soon let contract to complete interior work
of Masonic Temple, including plumbing, light-
ing, heating, ventilating and interior finish;
cost, out \$48,500 for work up to and includ-
ing third floor, fully equipped as to plumbing,
heating, ventilating, elevator enclosures, etc.;
cost about \$40,125 for completion of all in-
terior work on 2 upper floors for Scottish Rite
Masons, Knight Templars and Shriners, sepa-
rate bids received on this work; H. W. Wit-
cover, Archt., Savannah.

Ga., Washington.—Pembroke Pope will
erect apartment-house; steam heat; vacuum-
cleaning system; 4 stories; elevator.

Mo., Kansas City.—Eaton & King will erect
2 three-story 6-apartment flats at 4020-26 Har-
cost \$10,000.

Mo., Kansas City.—R. J. DeLano will erect
2 three-story 6-apartment flat at 4020-26 Har-
rison St.; cost \$36,000.

Mo., St. Louis.—Chas. M. Hahn will erect
single flat on Ohio Ave.

Mo., St. Louis.—Geo. J. Wibelmsman will
erect flats on Humphrey St.; site 95x125 ft.

Mo., St. Louis.—J. B. Westermayer will
erect 2-story tenement-house at 3125-27 Lack-
land St.; cost \$4800; construction by owner.

Mo., St. Louis.—J. M. Moran will erect two
2-story tenements at 4052-58 Lafayette Ave.;
cost \$11,000; construction by owner.

Okl., Tulsa.—Eugene Lorton, S. Guthrie
St., will erect apartment-house at 15th and
Main Sts.; cost \$10,000; also plans to erect
residence on Irving Pl.

Tenn., Nashville.—John T. Lelylett is hav-
ing plans prepared by Geo. D. Waller, Nash-
ville, for apartment-house; 2 stories; brick;
stone foundation and trimming; slate roof;
cost \$15,000.

Tex., Dallas.—R. I. Staton will erect 12-
room apartment-house at 5204 Crutcher St.;
cost \$5500.

Tex., El Paso.—P. E. Bogardus will erect
apartment-house on California St.; cost
about \$7000.

Va., Richmond.—Claude E. Sprengle will
erect 2 two-story brick tenements on Stuart
Ave., between Tilden and Cleveland Sts. and
Cherry St. between Floyd Ave. and Main St.;
cost \$26,000.

ASSOCIATION AND FRATERNAL

Fla., Bartow.—Bartow Lodge, A. F. & A.
M., will have plans prepared by Mark &
Sheftall, Clark Bldg., Jacksonville, for store,

Tex., Sherman.—W. L. Whitlock's residence
at 1206 N. Harrison Ave.; loss \$3500.

Tex., Victoria.—Our Lady of Lourdes Ger-
man Catholic Church; loss \$12,000. Address
The Pastor.

Va., Gladesboro.—Cleveland Tobler's dwell-
ing; L. A. Lincherry's residence.

Va., Hot Springs.—Postoffice building; loss
\$10,000 to \$15,000. Address The Postmaster.

Va., Lynchburg.—Adolphus Humble's 2
residences.

Va., Marmora, R. D. from Church Road.—
W. K. Davis' saw mill; loss \$1200.

W. Va., Logan.—James G. McKnight's resi-
dence on High St.

Va., Oak Grove.—High school. Address
School Trustees.

W. Va., Parkersburg.—Oil Well Supply
Co.'s rig and reel plant damaged; estimated
loss \$2000.

Va., Staunton.—J. C. F. Bell's stable on N.
Lewis St.

W. Va., Charleston.—Eugenia Gilardi's
store and dwelling at Virginia and Clendenin
Sts.

DAMAGED BY EXPLOSION

La., Monroe.—Monroe Steam Laundry Co.'s
plant; estimated loss \$3000.

office and lodge building; 4 stories; probably
brick construction; cost \$30,000.

Ky., Clay City.—Knights of Pythias plan
to erect store, office and lodge building.

Ky., Louisville.—Fraternal Order of Eagles
will erect building at 812 S. 2d St.; M. G.
Mature, Chrmn. of Building Com.

Md., Cumberland.—Allegany Trades Coun-
cil will erect labor temple; 3 stories; lower
floor for stores and bowling alley; second
floor for auditorium; upper floor for lodge-
rooms; plans in progress by local architect;
cost \$15,000; J. S. Berwick, C. O. Roemer,
A. B. Fogle and others, Com.

Mo., Springfield.—Y. W. C. A. will have
plans prepared by O. L. Buttner, Holland
Bldg., Springfield, for building on S. Jeff-
erson St.; probably 75x150 ft.; 3 stories and
basement; bids probably opened in Feb.;
cost \$50,000 to \$60,000. Address Harry L.
Cooper, Chrmn. of Bldg. Com.

S. C., Gaffney.—Horace Brown has plans
for store, office and Elks' Lodge building.
(See Stores.)

Tenn., Jackson.—Y. M. C. A. will expend
\$13,000 to enlarge building.

Tex., Austin.—Y. M. C. A. is not planning
to erect gymnasium as lately noted.

Tex., Wichita Falls.—A. F. & A. M. will
soon let contract to erect building at 10th
and Scott Sts.; 50x150 ft.; 3 stories; ordi-
nary construction; composition roof; wood
and tile floors; automatic push-button ele-
vator; cost \$50,000; steam-heating plant
\$4000; Field & Clarkson, Archts., Wichita
Falls. (Lately noted.)

W. Va., Bluefield.—Bluefield Lodge, B. P.
O. E., will expend \$40,000 for improvements.

W. Va., Union.—Monroe Lodge No. 77, A.
F. & A. M., will remodel building, erect
14-ft. addition, construct porch flanked on
either side by tower, convert lower floor into
auditorium, etc.

BANK AND OFFICE

Fla., Bartow.—Bartow Lodge, A. F. & A.
M., will have plans prepared for office, store
and lodge building. (See Association and
Fraternal.)

Ky., Clay City.—Knights of Pythias plan
to erect office, store and lodge building.

Ky., Hazard.—Wm. Purcell and Emanuel
Coombs will erect store and office building.
(See Stores.)

N. C., Lexington.—Holt & Williams will
erect building 2 stories front; second story
extending 37 ft. toward rear, and containing
10 rooms, 12x15 ft., with 6-ft. hallway.

S. C., Gaffney.—Horace Brown has plans
for store, office and lodge buildings. (See
Stores.)

Tenn., Shelbyville.—Shapard Bros. will
erect offices and warehouses.

Tex., El Paso.—M. D. Roberts and Wm.
Banner will erect building at Mills and

Stanton Sts.; 7 stories; brick and concrete; 60x112 ft.; fireproof; cost \$200,000 to \$250,000; construction to begin about Mch. 1; lower floor for stores; upper floors for offices.

CHURCHES

Ala., Mobile.—Greek Orthodox Society will erect church at Broad and Charleston Sts.; Louis G. Llapulos is interested.

Ala., Piedmont.—Methodist Episcopal Church South will erect building at Main and Alabama Sts.; brick veneer; furnace heat; electric lights; definite plans not decided; construction begins about Jan. 1. Address F. M. Formby, Chmn. Bldg. Com. (Lately noted.)

Ark., Little Rock.—Church of the Nazarene, 14th and John Sts., will erect building.

Fla., Monticello.—Catholic church will erect building; plans by and construction under supervision of Mr. Ladd, Monticello; Leo Majewski and others, Com.

Ga., Savannah.—Primitive Baptist Church will erect building; cost \$10,000; E. W. Parish, Chmn. of Com.

Ga., Savannah.—Methodist Church, F. H. Marshall, Chmn. Building Com., has plans by W. A. Rayfield & Co., Birmingham, Ala., for building at Drayton and Gaston Sts.; 50x100 ft.; brick; metal-shingle roof; pine floors; hot-air heat; electric lights; cost \$10,000; bids opened in spring. Address architects. (Noted in October.)

Ky., Burkesville.—Christian Church, W. F. Alexander, Chmn. of Building Com., will erect building 50x100 ft.; brick and stone; metal roof; pine floor; steam heat; electric lights; cost \$12,000; date of opening bids not decided; W. A. Rayfield & Co., Architects, Birmingham, and they may be addressed.

Ky., Hazard.—First Baptist Church has plans by W. A. Rayfield & Co., Birmingham, Ala., for building; 26x45 ft.; brick and stone; metal roof; pine floor; hot-air heat (mechanical); electric lights; date of opening bids not set. Address architects.

Ky., Louisa.—Methodist Episcopal church South will probably erect building. Address The Pastor.

Md., Baltimore.—Temple Baptist Church is having plans prepared by Clyde N. Friz, Munsey Bldg., Baltimore, for building at Rosedale and Walbrook Aves.; 40x75 ft.; stone; slate roof; steam heat; electric light; cost about \$20,000; plans ready about Dec. 25.

N. C., Aurora.—Episcopal Church, Rev. T. N. Lawrence, Rector, has plans by Ferguson, Calrow & Wrenn, Norfolk, Va., for building on Main St.; 80x30 ft.; brick; metal roof; wood floors; steam heat; electric lights; cost \$2500. Address The Pastor. (Lately noted.)

N. C., Wilmington.—Trinity Methodist Church, Rev. W. V. McKee, Pastor, will erect church on Market St.; W. R. Yopp, A. B. Drew and others, Building Com.

S. C., Greenwood.—Main Street Methodist church will erect building; cost \$40,000 to \$50,000; A. C. Stockman, C. C. Featherstone, George Hart and others, Com.

Tenn., Chattanooga.—Pilgrim Congregational Church, Rev. C. H. Myers, Pastor, will erect building.

Tex., Dallas.—First Methodist Episcopal Church South, Rev. Sam R. Hays, pastor, will erect building.

Tex., El Paso.—Temple Mt. Sinai is having plans prepared by Trost & Trost, Mills Bldg., El Paso, for temple at Montana and Oregon Sts.; estimated cost, \$50,000.

Tex., Henrietta.—Baptist church will expend \$8000 to remodel building; W. H. Davison, Chmn. of Com.

W. Va., Warwood.—Lutheran church will erect building at 17th St. and Warwood Ave.; completion by July; R. A. Harsman, Chas. A. Peterson, Harry E. Hohman and others, Com.

W. Va., Wheeling.—Trinity Lutheran Church, Rev. O. C. Dean, 3705 Eoff St., has plans by Fred Farris, Wheeling, for building at 3536 Eoff St.; 50x100 ft.; brick with stone trimmings or stone facing; slate or tile roof; hardwood or pine floor; steam heat; semi-direct electric lights; construction begins about March; cost \$30,000. Address A. F. Ulrich, Chmn. Construction Com., 2717 Eoff St.

CITY AND COUNTY

Miss., Yazoo City.—Poorhouse.—S. S. Griffin, Clerk, receives bids until Dec. 6 to erect 6-room house at poorhouse; plans and specifications on file.

Tex., Victoria.—Fire Station.—City approved plans for fire station; authorized committee to advertise for bids; 2 stories;

brick; 70x59 ft.; auditorium 60x40 ft., with seating capacity 500; cost about \$15,000. Address The Mayor.

Va., Norfolk.—Market.—City will consider erecting market and improving butchers' market; estimated cost \$75,000. Address The Mayor.

COURTHOUSES

Ark., Pine Bluff.—Jefferson County Commrs. will expend \$5000 to improve south wing of courthouse; will extend, rebuild rear wall, paint exterior and interior; also erect \$800 addition to jail for kitchen.

Fla., St. Augustine.—St. Johns County Commrs., I. I. Moody, Chmn., are considering erecting fireproof courthouse.

Ga., Savannah.—Chatham County will remodel portions for courthouse into municipal court quarters according to plans by H. W. Witcover, Savannah; bids opened Nov. 30. Address Clerk of Council. (Lately noted to have voted \$50,000 bonds to erect addition to courthouse.)

Miss., Pontotoc.—Pontotoc county is reported to receive bids until Dec. 6 to erect courthouse; cost about \$75,000; Overstreet & Spencer, Jackson, Miss., and Mahon & Broadwell, Memphis, Tenn., Assoc. Archts. (Lately noted.)

Mo., Galena.—Stone county votes Dec. 4 on \$35,000 bonds to erect courthouse. Address County Commrs. (Recent election on same issue lately noted defeated.)

Tex., Wichita Falls.—Wichita county voted \$225,000 bonds to erect courthouse. Address County Commrs. (Lately noted.)

DWELLINGS

Ark., Little Rock.—A. W. Strawn has plans by Harry Weston, 211 Masonic Temple, for residence on Pulaski Heights; cost \$3000.

Ark., Little Rock.—H. F. Weiman has plans by Harry Weston, 211 Masonic Bldg., Little Rock, for residence; cost \$10,000.

Ark., Little Rock.—S. M. Apple will erect 2-story brick-veneer residence at 2022 Battery St.; cost \$6500.

Ark., Little Rock.—M. E. Dunaway will erect residence at 25th and Summit Ave.; 2 stories; cost \$15,000.

Ark., Texarkana.—C. A. Hamner will erect cottage; woodwork type; brick and stucco; construction begun.

D. C., Washington.—Dr. Wm. T. Gili, 414 M St. N. W., has plans by N. T. Haller, Corcoran Bldg., Washington, for residence and garage at 324 F St. N. W.; 2 stories; brick; cost \$4000; construction by owner.

D. C., Washington.—Chas. H. Taylor, 3433 34th Pl. N. W., will erect dwellings on 35th and Macomb Sts. N. W.

D. C., Washington.—Wilbur W. Bill, 4200 Keokuk St. N. W., has plans by E. D. Rysen, 3759 Northampton St. N. W., for dwelling at 4201 Keokuk St. N. W.; 2 stories; tile; cost \$4000; construction by owner.

D. C., Washington.—Henry A. Vieth has plans by Conrad M. Chaney, 2330 25th St. N. E., Washington, for four 1-story frame dwellings at 2509-15 26th St. N. E.; cost \$10,000.

Fla., Jacksonville.—Lorenzo W. Baldwin has plans by Talley & Sumner Co., St. James Bldg., Jacksonville, for residence; 2 stories; stucco; tile roof; furnace heat; hardwood floors; tile work; hardwood trim; cost \$8000 to \$9000.

Fla., Leesburg.—J. D. Hannah, Frankfort, Ky., will erect residence.

Fla., Orlando.—Richard Callis and Nathan O. Wilson will erect residence.

Fla., Sanford.—John Herby will erect residence in E. Sanford.

Fla., St. Petersburg.—Dr. Welch of Welch Grape Juice Co., Westfield, N. Y., is reported to erect residence in Davista.

Fla., Turkey Creek.—J. W. White will erect residence near Turkey Creek.

Ga., Atlanta.—Dr. L. O. Bricker will erect residence at 425 St. Charles Ave.; day labor; cost \$5000.

Ga., Atlanta.—James T. Williams will erect bungalow in Ansley Park; cost \$4250.

Ga., Atlanta.—H. W. Nicholas will erect residence on Park Lane, Ansley Park.

Ga., Atlanta.—A. N. Sharp will erect one-story bungalow at 100 Highland Ave.; cost \$3000.

Ga., Columbus.—Gay Garrard will rebuild residence noted damaged by fire.

Ga., Columbus.—Charles Phillips will erect 10 three and four-room dwellings on Second Ave.; construction begun.

Ga., Columbus.—W. J. Sykes will erect 4 dwellings on Third Ave.; 4 and 5 rooms; construction begun.

Ga., Cuthbert.—E. C. Phillips will erect residence.

Ga., Ludowici.—R. C. Hines will erect bungalow.

Ga., Macon.—L. E. Nowell will erect 6-room bungalow.

Ga., McDonough.—R. L. Turner will erect residence; 8 rooms; brick veneer; tile roof; hardwood floors; cost \$8000; steam or hot-water heat \$500; construction begins Mch. 1. (Lately noted.)

Ga., Macon.—James W. McCaw will erect 2-story brick residence at Georgia Ave. and Orange St.; construction begun.

Ky., Harlan.—M. D. Smith will erect number of cottages on N. Cumberland Ave.; construction begun.

Ky., Louisville.—A. C. Miller will erect brick-veneer dwelling at 1072 Everett Ave.; cost \$3500.

La., Delhi.—Mrs. F. Garley will rebuild store and dwelling 5 miles from Delhi, noted damaged by fire.

Md., Baltimore.—Dr. R. T. Abercrombie has plans by Edw. L. Palmer, 408 Roland Ave., Roland Park, Md., for dwelling in Guilford; 2½ stories; 45x30 ft.; brick; slate roof; steam heat; cost about \$11,000; bids soon.

Md., Baltimore.—Wm. T. Childs, 14-16 W. 20th St., will erect 20 two-story porch-front brick dwellings on Moreland Ave.; 14x50 ft. each; slag roof; wood floors; reported cost \$50,000; steam heat, \$140; gas and electric lights, \$50 each; construction, by owner, begins Dec. 1; F. E. Beall, Archt., 306 St. Paul St. Address owner.

Md., Baltimore.—Frank Novak Realty Co., 744 N. Kenwood Ave., has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 8 dwellings at 2030-44 N. Washington St.; 15.5x47 ft.; 2 stories; brick; tile roof; steam heat; electric light; cement walk; cost \$14,400; construction by owner. (Lately St. at Clifton Park.)

Md., Baltimore.—Annex Construction Co., 27th and Barclay Sts., have plans by G. Bernard Lohmuler, 1735 N. Broadway, Baltimore, to erect dwellings on Whitridge Ave.; 2 stories; porch front; 6 rooms and bath; brick; Carey roof; hot-air heat furnace and ranges; gas and electric lights. Address architect at 27th and Barclay Sts. (Lately noted to erect 26 dwellings.)

Md., Baltimore.—Frank Novak, 744 N. Kenwood Ave., is having plans prepared by Otto G. Simonson, Maryland Casualty Tower Bldg., Baltimore, for residence at Harford and Mayfield Aves.; brick or stucco; 35x40 ft.; colonial style.

Md., Baltimore.—John V. Hoffman, 1416 W. Lanvale St., will erect cottage on Chatham Rd. near Garrison Ave.; 28x28x34 ft.; 2½ stories; frame; cost about \$5000.

Md., Baltimore.—John F. Donovan is having plans prepared by Edward L. Palmer, Jr., 408 Roland Ave., Roland Park, Md., for residence at Guilford.

Md., Cumberland.—Wm. C. Devenmon will erect bungalow.

Miss., Brookhaven.—E. P. Futrell contemplates erecting residence.

Mo., Kansas City.—Amos Barr will erect 2-story brick dwelling at 3216 E. 30th St.; cost \$4000.

Mo., St. Louis.—Fred E. and Emma C. Brueske will erect bungalow.

Mo., St. Louis.—Harry C. Meyer will erect residence on Elcheiberger St.

Mo., St. Louis.—Anton Heist will erect residence on Rosa Ave.; 7 rooms and sleeping porch.

Mo., St. Louis.—John C. Greulich Realty Co. is arranging to erect 10-room dwelling; cost \$10,000.

Mo., St. Louis.—M. H. Finck will erect 9 bungalows; 18 in. stone walls and 13 in. brick walls; birch doors, yellow pine finish; tile bath; clothes chutes; marble sinks; cost about \$30,000.

Mo., St. Louis.—Frank X. Hiemenz, Prest. of Berkley Realty & Investment Co., has plans by Saum Architects, Leathe Bldg., St. Louis, for residence in Tower Grove Pl.; English cottage style; frontage 50 ft.; paved brick porches; white stucco exterior; red tile roof; several outhouses, pergola, paved walks, etc.; cost \$10,000.

Mo., St. Louis.—Mrs. Melina Sattel will erect bungalow on Humphrey St.

N. C., Pilot Mountain.—I. M. Gordon, Cashr. Bank of Pilot Mountain, will erect residence.

N. C., Winston-Salem.—L. L. Campbell will erect 3 frame dwellings on Washington Ave.

Okla., Tulsa.—C. E. Dent will erect residence in Morningside.

Okla., Tulsa.—Eugene Lorton, 8, Guthrie St., will erect residence on Irving Pl. (See Apartment-houses.)

Okla., Tulsa.—S. E. Dunn will erect residence at 1211 S. Boston Ave.; 2 stories; frame; cost \$5000.

S. C., Columbia.—A. C. Summers has plans by J. H. Sams, Columbia, for dwelling; 2 stories; brick veneer; hardwood floor; tile roof; cost \$4000; contract let soon.

Tex., Abilene.—W. W. Ince, Wichita Falls, Tex., will erect 6-room bungalow.

Tex., Abilene.—John Jackson will erect 6-room bungalow at Orange and 4th Sts.

Tex., Dallas.—W. H. Vaughan will erect 2 five-room frame cottages at 502-507 Page St.; cost \$3000.

Tex., Dallas.—Chandler Bros. will erect residence at 4721 Junius St.; 2 stories; 8 rooms; frame; asphalt shingle roof; double oak floors; Moneroff heating plant; electric lights; cement sidewalks; plans and construction by owner. (Lately noted.)

Tex., Dallas.—V. C. Dargan will erect two-story eight-room residence at 719 W. 9th St.; cost \$3000.

Tex., El Paso.—Mrs. Pauline Koenig will erect residence; 1 story; brick.

Tex., El Paso.—L. B. Trotter will erect bungalow on McKinley Ave.; cost \$3500.

Tex., El Paso.—Boynton & Metus will erect brick bungalow in Alamo Heights; cost \$3700.

Tex., El Paso.—W. D. Moseley will erect bungalow in Manhattan Heights; brick; 2½ 35x20 ft.; cost \$3000.

Tex., Houston.—L. L. Linebaugh has plans by A. Dellsie, 704½ Main St., Houston, for residence in Montrose; 32x49 ft.; frame and stucco; shingle roof; oak floors; cost about \$5000; day labor.

Tex., Jermyn.—Roy Jackson, Fort Worth, Tex., has plans by Walter E. Taylor, Fort Worth, for residence on Jackson ranch; 2 stories; 10 rooms, halls, pantry and bath; frame; concrete foundation; shingle roof; yellow pine floors; roughed in for electric lights; cost \$3000; day labor. (Previously noted.)

W. Va., Logan.—Wilson Coal Co. will erect 25 or more dwellings.

Va., Norfolk.—Goldsboro Serpell has plans by J. W. Lee, Norfolk, for addition to residence at Westover and Thetford Aves.; will install electric push-button passenger elevator, etc.

Va., Richmond.—Terrell Building Co. will erect 2-story frame dwelling on Enslow Ave. between Burns and Pollock Sts.; cost \$3000.

Va., Richmond.—Thos. B. McAdams will erect residence; 2½ stories; brick and stucco; cost \$20,000.

Va., Richmond.—A. J. Bowman will erect 2-story frame dwelling on Stuart Rd.; cost \$4500.

Va., Richmond.—F. H. Boatwright will erect 2-story brick dwelling on 4th Ave. between Custer and Leonard Sts.; cost \$4000.

GOVERNMENT AND STATE

D. C., Washington.—Stable.—Government will repair stable of office quartermaster at Washington Barracks; bids opened Nov. 30; further information on application to quartermaster.

Fla., Sarasota.—Postoffice.—Dr. A. F. Wrede will erect building for postoffice, etc. (See Stores.)

Tex., Austin.—Office Building, etc.—State is having plans prepared by Albee B. Ayres, Bedell Bldg., San Antonio, for Land Office building; cost \$200,000; also plans for remodeling State Capitol; work will include copper roof; general repairs and heating, plumbing and lighting systems; plans for latter ready about February. (Previously noted.)

HOSPITALS, SANITARIUMS, ETC.

Ala., Birmingham.—Birmingham Infirmary, Dr. Chas. M. Nice, V.-P., will erect addition in West End; 2 units; 50x100 ft.; 3 stories; pressed brick; inclines from floor to floor; cost about \$100,000; Wm. Leslie Welton, Archt., Birmingham; Mrs. Birdie Gollyghtly, Supt.

Ala., Clanton.—T. B. Dorniny and others are promoting organization of company to erect and equip hospital.

Ark., Little Rock.—Dr. Morgan Smith, dean of medical department, University of Arkansas, is promoting erection of State General Hospital.

Ga., Moultrie.—Park Harper is Chmn. of Com. promoting erection of \$20,000 hospital. N. C., Badin.—American Aluminum Co. is reported to erect hospital.

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La., New Orleans.—City opened bids to erect isolation hospital; J. A. Pelz is lowest bidder at \$32,956; plans by E. A. Christy, 25 City Hall, New Orleans, call for 1-story frame structure; composition roof; hot-water heat. (Lately noted.)

Tex., Austin.—State has plans by Atlee B. Ayres, Bedell Bldg., San Antonio, for hospital for Confederate Woman's Home; 2 stories and basement; fireproof; concrete frame; hollow tile walls; composition roof; tile baths; steam heat; ready for bids.

HOTELS

Ark., Hot Springs.—Waukesha Hotel has plans by Chas. L. Thompson, 39 Urquhart Bldg., Little Rock, Ark., to remodel hotel; will install new plumbing throughout, remodel heating system, etc.; cost \$15,000.

Ark., Rush.—D. W. Kirkland, Little Rock, Ark., will erect hotel; construction begun.

Tenn., Lebanon.—J. W. Hamilton is reported interested in organization of company to develop Hamilton property at Hampton Springs; will erect hotel, dancing pavilion, swimming pool with cement sides and bottom; hotel and grounds lighted with electricity generated with company's plant.

Tex., Beaumont.—Jefferson Hotel Co. receives bids through Cooke & Co., Theater Bldg., Houston, until Dec. 27 to erect Hotel Jefferson at Laurel and Alamo Sts.; 9 stories; reinforced concrete construction; terra-cotta and brick; fireproof; about 157 sleeping-rooms, 20 sample-rooms, dining hall to seat 50; circular rotunda with marble staircase; Texas hardwood interior finish; 106 ft. high; roof garden; private steam-heating plant, ice plant, bakery and telephone exchange; electric passenger and freight elevators; plans and specifications on file with architects call for construction to begin in Jan.; completion in 9 months; cost about \$200,000.

Va., Norfolk.—Atlantic Hotel will expend \$500 to alter lobby.

Va., Roanoke.—L. E. Johnson, Prest. of Norfolk & Western R. R., and associates will enlarge Hotel Roanoke; plans said to include installation of additional baths and plumbing, enlargement of lobby 50 per cent., doubling size of dining-room, etc.; fireproof construction; cost \$200,000.

MISCELLANEOUS

Ala., Spring Hill.—Clubhouse.—Mobile Country Club, Mobile, Ala., has plans by Geo. B. Rogers, Van Antwerp Bldg., Mobile, for clubhouse; 3 stories; ballroom 40x100 ft.; gallery 14 ft. wide around entire building; cost about \$15,000.

D. C., Washington.—Studio.—George Oakley Totten, Jr., 808 17th St. N. W., will erect 1-story brick studio at 2536 15th St. N. W.; cost \$3000.

Fla., Salerno.—Clubhouse.—Salerno Development Co. is having plans prepared by Rutledge Holmes, Duval Bldg., Jacksonville, for clubhouse; frame; cost \$6000.

Ky., Lexington.—Clubhouse.—David M. Look, New York, is reported having plans prepared for clubhouse on Castleton Stock Farm to replace structure previously burned.

N. C., Winston-Salem.—Home.—Children's Home, Walter Thompson, Supt., will erect girls' building; cost \$10,000.

RAILWAY STATIONS, SHEDS, ETC.

Md., Baltimore.—Baltimore & Ohio R. R., F. L. Stuart, Ch. Engr., will erect 1-story building, 30x112.6 ft., on Pratt St. between Poppleton and Carey Sts., for storekeeper.

Tex., Clarendon.—Fort Worth & Denver City Ry., R. G. Gowdy, Ch. Engr., Fort Worth, Tex., will expend \$10,000 to repair depot.

SCHOOLS

Ala., Anniston.—City voted \$35,000 bonds for schools; J. L. Winkle, Mayor. (Lately noted.)

Ala., Birmingham.—West End Catholic Church will erect addition to parochial school for boys. Address The Pastor.

Ala., Spring Hill.—Spring Hill College let contract to erect entrance containing 2 rest-houses and triple arch; stone and brick; electric lights; cost \$5000; J. P. O'Leary, Supervising Archt., New Orleans, La.

Fla., Archer.—School Trustees will erect \$10,000 school.

Fla., Key West.—City has plans for gymnasium on Division St. School grounds; 72x30 ft.; practically open on 4 sides; roofing to extend several feet down; heavy wire railing around entire structure. (Previously noted.)

Fla., Seabreeze.—Board of Public Instruction is having plans prepared by Mark & Sheftall, Clark Bldg., Jacksonville, for grammar-high school; 3 stories; concrete; Spanish tile cornice and inserts, 11 classrooms, 2 recitation-rooms, study hall, auditorium to seat 650; provision for 5 additional classrooms in basement; cost \$40,000 to \$50,000.

La., Amal Parish.—Police Jury will consider election on tax to erect \$20,000 high school.

Md., Baltimore.—Architectural Comm. selected Alfred Cookman Leach, 323 N. Charles St., Baltimore, to prepare plans for school in Patterson Park; has \$100,000 appropriation. (Previously noted.)

Mo., Joplin.—City voted \$350,000 bonds to erect \$300,000 high-school and make other school improvements. Address Board of Education. (Lately noted.)

N. C., Edenton.—Edenton Graded School Dist. voted \$25,000 bonds to erect school; J. R. McMullan, Clerk Town Council. (Lately noted.)

Mo., Plattsburg.—Board of Education, E. McWilliams, Secy., receives bids until Dec. 15 to erect 2-story and basement, 60x50 ft., and 1-story and basement, 70x50 ft., high school; cost about \$35,000; Owens & Payson, Archts., 713 Scarriff Bldg., Kansas City, Mo.

Mo., Columbia.—Stephens College, J. M. Wood, Prest., will erect administration building, dormitory and heating plant; plans in progress.

Mo., St. Louis.—St. Louis Cathedral Parish, Rev. Francis Gillilan, Pastor, has plans by Barnett, Haynes & Barnett, St. Louis, for parochial school and assembly hall; "T" shape; this portion of structure 140x50 ft.; 2 stories and basement; south wing 90x50 ft.; assembly hall 2 stories; brick and terra-cotta; Tudor style; domestic science equipment, gymnasium, etc.; cost \$75,000 to \$100,000.

Okla., Tulsa.—Board of Education opens bids Dec. 20 to erect \$300,000 high school; 260x125 ft.; fireproof; reinforced-concrete floor; fan system heat; electric lights; blank forms, specifications, etc., at office of Geo. Winkler, Archt., Tulsa. (Previously noted.)

S. C., Columbia.—City is having plans prepared by J. H. Sams, Columbia, for Blossom St. School; 2 stories; 8 classrooms; brick; fan system heat; tin roof; plans ready about Dec. 27. (Lately noted.)

Tenn., Bristol.—City voted \$60,000 bonds to erect high school; W. H. Lynn, Commr. Accts. and Finance. (Lately noted.)

Tenn., Cleveland.—Bradley County School Board lets contract Dec. 14 to erect \$25,000 high school.

Tenn., Cookeville.—Asmus & Norton, Archts., 505-508 Cole Bldg., Nashville, Tenn., receive bids until Dec. 4 to erect (1) boys and girls' dormitories; (2) remodel administration building; (3) install heating apparatus; (4) construct boiler-house; at Tennessee Polytechnic Institute; bids received separately as above or as whole; completion by Sept. 1. (Lately noted to expend \$145,000 for entire plant.)

Tenn., Knoxville.—School Trustees adopted plans for school; 6 rooms; brick veneer; cost about \$6000.

Tenn., Nashville.—Verner Tolmie, Chrmn.; A. E. Potter and Aaron Bergeda, Building Com., receive bids in detail until Dec. 10 to erect 2 schools as follows: Elliott School, Jefferson St. and 6th Ave., according to plans by Marr & Holman, 701 Stahlman Bldg.; Colored High School, 16th Ave. and Grant St.; Chas. Ferguson, Archt., 63 Arcade, Nashville; plans and specifications at office respective architects and Builders' Exchange, Noel Block.

Tex., Abilene.—Simmons College, J. D. San-derfer, Prest., will erect \$10,000 dormitory.

Tex., Austin.—State is having plans prepared by Atlee B. Ayres, State Archt., Bedell Bldg., San Antonio, for Blind Institute; about 15 buildings; fireproof; cottage system; cost about \$300,000. (Previously noted.)

Tex., Bransford, P. O. at Springfield.—City will erect proposed school at Pleasant Run; cost \$4000.

Tex., Houston.—School Dist. No. 20 voted \$50,000 bonds to erect school. Address Dist. School Trustees. (Previously noted.)

Tex., Greenville.—Wesley College will erect administration building; cost about \$50,000.

Tex., Houston.—City Secy. receives bids until Dec. 13 to construct Montrose School administration building; separate contracts as follows: (1) General contract; (2) heating; (3) plumbing; (4) wiring; plans and specifications at office of City Architect; Ben Campbell, Mayor.

Va., Oak Grove.—School Trustees will rebuild high school reported damaged by fire.

W. Va., Spencer.—Board of Education receives bids through H. C. Ferguson, Secy., until Dec. 22 to erect high school; 65x90 ft.; 3 stories; rough texture brick; stone trim; entrance and towers reinforced concrete; balance of interior work subdivided by masonry partitions; slow-burning type floor construction; Verus T. Ritter, Archt., Huntington, W. Va., may be addressed relative to bids, materials, etc. (Previously noted.)

STORES

Ala., Birmingham.—Sydney M. Smith will erect 2-story brick-veneer building in Milner Crescent, South; cost \$4400.

Ala., Moulton.—Howell & Delsahw will erect concrete store building.

Fla., Bartow.—Bartow Lodge, A. F. & A. M., will have plans prepared for store, office and lodge building. (See Assn. and Frat.)

Fla., Brooksville.—W. S. Jennings, Jacksonville, Fla., is having plans prepared by W. B. Camp, Board of Trade Bldg., Jacksonville, for business building; 2 stories; 80x105 ft.; brick construction; press brick front; composition asphalt shingles; tile floors.

Fla., Sarasota.—Dr. A. F. Wrede will erect building on Church St. for postoffice and store building.

Fla., Tampa.—Mrs. L. Moses will erect business building on Lafayette St.; 1 story; brick; 29x75 ft.; ordinary brick construction; Carey roofing; tile floors; cost \$4000; additional stories later; Fort & Parslow, Archts., Curry Bldg., Tampa, may be addressed; bids opened Nov. 29.

Ga., Athens.—Moss & Co. will remodel store building to be occupied by McCommons-Thompson-Boswell Co., Greensboro, Ga.

Ga., Atlanta.—Harry Morris, Chicago, is reported to erect building on S. Pryor St., to be occupied by Ridley-Williamson-Wyatt Co.; 4 stories; mill construction; cost about \$30,000.

Ga., Gainesville.—B. H. Merck will erect additional story to building at Maple and Broad Sts.

Ga., Griffin.—Will Hill, Edgar and Ernest Newton will erect business building; 2 stories; brick; plans in progress.

Ga., Savannah.—Dr. M. A. Morris will erect 3 buildings; 2 stories; metal roof; cost about \$5000.

Ky., Clay City.—Knights of Pythias plan to erect store, office and lodge building.

Ky., Hazard.—Wm. Purcifull and Emanuel Coombs will erect brick store and office building; electric wiring and fixtures; cost \$9000. Address Geo. B. Cornell, Box 508, Hazard. (See Machinery Wanted—Building Materials, etc.)

Ky., Scottsville.—Misses Brown will erect store building; has plans by R. E. Turberville, Nashville, Tenn., for 2-story concrete store building.

La., Delhi.—Mrs. F. Garley will rebuild store and dwelling 5 mi. from Delhi, noted damaged by fire.

Md., Cumberland.—Allegheny Trades Council will erect building for stores, etc. (See Association and Fraternal.)

Mo., St. Louis.—Gerald B. O'Reilly plans to erect buildings on Ames property.

Mo., St. Louis.—Michael Harer will erect 4 one-story brick buildings in Hadley Park.

N. C., Winston-Salem.—B. S. Womble and others are reported planning to erect business buildings at Cherry and 3d Sts.

Okla., Ada.—Fred White, Oklahoma City, will erect 3 two-story brick buildings on E. Main St.

Okla., Ringling.—Charles Adams, Mgr., Swift Packing Co., Ardmore, Okla., will erect 2 or 3-story business block.

S. C., Gaffney.—Horace Brown has plans by F. H. & J. G. Cunningham, Greenville, S. C., for store, office and lodge building; brick; 3 stories; 60x80 ft.; steam heat; Carey's roofing; cost \$10,000; construction, by day labor, to begin at once. (Lately noted.)

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

D. C., Washington.—Stephen I. Sheehy let contract to erect store and flat building. (See Stores.)

Ky., Paducah.—Harris L. Rankin let contract to W. M. Karnes, Paducah, to erect apartment-house; 50x56 ft.; 3 stories; 6 suites; brick; concrete foundation; Carey composition roof; rift pine floor; electric heat; city light; cost \$15,000; W. L. Brainard, Archt., Paducah, Ky.

by day labor, to begin at once. (Lately noted.)

Tenn., Memphis.—G. Mohr & Sons will erect business building at Front and Talbot Sts.; 2 stories and basement; brick and concrete; cost \$10,000.

Tenn., Nashville.—W. W. Dillon will remodel store building at 304 Third Ave. North; Thos. W. Gardner, Archt., Nashville.

Tenn., Nashville.—Huddleston-Cooper Co. will remodel interior of store building on Church St.

Tex., El Paso.—M. D. Roberts and Wm. Banner will erect store and office building. (See Bank and Office.)

Tex., Port Arthur.—A. G. Wutky is having plans prepared by W. R. Burk, New Orleans, La., for brick and concrete store and office building; 5 stories.

Tex., Waco.—Pio Crespi will erect building at 10th and Austin Sts.; 2 stories; brick; 60x125 ft.

Va., Newport News.—H. C. Alexander will erect 2-story brick store building; H. A. Tignor is lowest bidder at \$2849.

THEATERS

D. C., Washington.—Marcus Loew, New York, plans to erect moving-picture theater on site of present Loew's Columbia Theater; 2 stories.

Md., Baltimore.—Gordon Realty Co. has plans by H. C. Alken, 2418 Harlem Ave., Baltimore, for motion-picture theater at Baltimore and Catherine Sts.; 1 story; 88.7x117.7 ft.; brick; slag roof; steam heat; cost \$12,000; construction by owner.

Okla., Tulsa.—William Smith, owner of Empress Theater, will erect theater; seating capacity 1400; lower floor, balcony and loge boxes; stage 35x70 ft.; foyer 25x75 ft.; cost about \$100,000.

W. Va., Charleston.—F. L. Whitney and W. S. Mason plan to erect theater and concert hall.

WAREHOUSES

Ark., Stamps.—Bodcaw Lumber Co., Wm. Buchanan, Prest., Texarkana, Ark., will rebuild warehouse and commissary lately noted damaged by fire at loss of about \$200,000; probably brick construction.

Ga., Augusta.—Grogan & O'Dowd are reported to erect fireproof warehouse on 9th St.; site 190x250 ft.

Ky., Augusta.—Burley Tobacco Co. will erect building for grading and storing tobacco; 136x208 ft.; mill construction; composition roof; electric lights; cost \$15,000; Fred Manley, Archt., Strand Theater Bldg., Lexington, Ky. (Lately noted to erect loose-leaf warehouse.)

Ky., Falmouth.—Burley Tobacco Co., Lexington, Ky., will erect tobacco prizery; 50x170 ft.; ordinary construction; composition roof; Fred Manley, Archt., Strand Theater Bldg., Lexington, Ky.

Ky., Cynthiana.—Burley Tobacco Co., Lexington, Ky., will erect sales warehouse; 124x216 ft.; ordinary construction; composition roof; Fred Manley, Archt., Lexington.

N. C., Turkey.—Turkey Storage Warehouse Co. Incptd. with \$10,000 capital stock by E. J. Hill, C. C. Hudson and others.

Okla., Tulsa.—Nichols Transfer & Storage Co. will erect building; 3 stories; 40x140 ft.; reinforced concrete; fireproof.

Tenn., Shelbyville.—Shapard Bros. will erect offices and warehouses.

Tex., Beeville.—Victoria Compress & Warehouse Co., Victoria, Tex., proposes to erect cotton concentration shed; 200x100 ft.; sheet iron sawtooth roof, with glass; wood floors; facing north 60 in. glass across entire length of each section; no architect or contractor; cost \$5000. (Lately noted.)

Tex., Greenville.—Waples-Platter Grocery Co. will erect addition to contain 9000 sq. ft. floor space.

W. Va., Huntington.—Warehouse Land Co. will erect frame and galvanized-iron warehouse on 27th St.; cost \$5700.

Tex., El Paso.—Mrs. E. W. Bryan let contract to Mayfield Building & Improvement Co., El Paso, to erect apartment-house at Prospect Ave. and Bryan St.; 2 stories; 3 suites; cost about \$9000.

ASSOCIATION AND FRATERNAL

S. C., Columbia.—W. B. Gulmarin Co., Columbia, has steam-heating contract for Masonic Temple, for which DuPre-Kennedy Construction Co., Columbia, has general con-

tract; 3 stories; 18x32 ft.; tile vestibule; brick and reinforced concrete; electric lights and gas; cost about \$31,000; Urquhart & Johnson, Architects, Nashville. (Lately noted.)

Tex., Pearsall.—Frio Lodge No. 399, A. F. & A. M., let contract to Monolithic Engineering Co., San Antonio, to erect lately-noted store, office and lodge building; 3 stories; 30x80 ft.; reinforced concrete frame; tar and gravel roof; concrete floors; cost \$10,000; R. H. Cameron, Archt., 707 Gibbs Bldg., San Antonio, Tex. (See Machinery Wanted—Building Materials, etc.)

BANK AND OFFICE

Ala., Anniston.—T. C. Bank let contract to erect business and office building. (See Stores.)

Ark., Tillar.—Harry Thane, Arkansas City, Ark., let contract to Wm. Van Valkenberg, Dermott, Ark., to erect bank and store building; 50x100 ft.; brick and metal; gravel roof; concrete floors; cost \$10,000; Chas. L. Thompson, Archt., Little Rock. (Bank of Tillar lately noted to erect building.)

Mo., Hannibal.—Water Pierce Oil Co., St. Louis, Mo., let contract to erect office building; reported cost \$70,000.

Mo., Jefferson City.—Logan Construction Co., Carthage, Mo., has contract to erect office building; reported cost \$70,000.

Tex., Pearsall.—Frio Lodge No. 399, A. F. & A. M., let contract to Monolithic Engineering Co., San Antonio, Tex., to erect office, store and lodge building. (See Association and Fraternal.)

CHURCHES

Ark., Osceola.—Baptist church let contract to W. W. Taylor & Sons, Cape Girardeau, Mo., to erect building; 75x75 ft.; brick; terra-cotta trimmings; tile roof; wood floors; cost \$20,000; hot-water heat, \$1000; electric lights, \$250; Parlow & Deas, Architects, Cape Girardeau, Mo. (Lately noted.)

Md., Baltimore.—Elderslie M. E. Church let contract to A. Knell, 215 St. Paul St., Baltimore, to erect building at Elderslie Ave. and Old Pimlico Rd.; 36x62 ft.; stone; cost \$9000; Haskell & Barnes, Architects, 391 N. Charles St., Baltimore. (Previously noted.)

N. C., Pollockville.—Methodist Church let contract to Hinson & Koonce, Pollockville, to erect brick building.

Tex., Beaumont.—Catholic Church let contract to P. J. Nangle, 705 Main St., Beaumont, to erect building at Bibb & Milam Sts.; 40x100 ft.; brick and stone; galvanized tin shingle roof; wood floors; electric lights; cost \$8000; Babin & Beck, Archt., Box 356, Beaumont, may be addressed.

CITY AND COUNTY

Ga., Winder.—Jail.—Barrow county let contract to H. J. Carr, Atlanta, to erect jail and install plumbing; to Manly Jail Works, Dalton, Ga., for cell work; direct steam heating; to H. M. Kirke, Dublin, Ga.; electric work to Brill Electric Co., Augusta, Ga.; building includes apartment for jailer; 2 stories; 12 cells; fireproof; ashlar granite base; tapestry brick and limestone trimming; Barrett Specification roof; Jas. J. Baldwin, Archt., Hubbard Bldg., Anderson, S. C. (Noted in Oct.)

COURTHOUSES

Ky., Campton.—Wolfe County Comms. let contract at \$23,000 to G. T. Center, Campton, to erect courthouse.

DWELLINGS

D. C., Washington.—W. H. Grimes let contract to Winfield Preston, 1718 8th St. N. W., Washington, to erect dwelling at 5748 McKinley St. N. W.; 2 stories; frame; cost \$5200; Rich & Fitz Simons, Architects, Bond Bldg., Washington.

D. C., Washington.—Chas. E. Baner let contract to J. F. Mills & Bro., 904 Shepherd St., Washington, to erect six 2-story brick dwellings at 61-61 H St. S. W.; cost \$5400; J. Germiller, Archt.

D. C., Washington.—C. Wendel Shoemaker let contract to A. J. LaCroz, 1223 Wisconsin Ave., to erect 2-story frame dwelling at 42d and Davenport St. N. W.; cost \$3125.

D. C., Washington.—Eudora B. Johnson let contract to Johnson & Moxley, 708 North Carolina Ave. S. E., Washington, to erect six 2-story brick dwellings at 921-31 Shepherd St.; cost \$16,000.

D. C., Washington.—Gustave R. Kraemer, 1532 14th St. N. W., let contract to John Simpson, Washington, to erect 2-story frame dwelling at 1426 Montague St. N. W.; cost \$3250.

D. C., Washington.—H. M. Hampton let contract to F. W. Hart, 233 Morgan St. N. W., Washington, to erect 2-story frame dwelling at 3937 Legation St. N. W.; cost \$4500.

D. C., Washington.—H. Glenn Phelps let contract to Chas. H. Taylor, 3433 34th Pl. N. W., Washington, to erect 2-story pebble-dash dwelling at 3767 Oliver St. N. W.; cost \$7000; Raymond Moon, Archt.

D. C., Washington.—P. M. Anderson let contract to F. W. Hart, 233 Morgan St. N. W., Washington, to erect 2-story frame dwelling at 5508 Broad Branch Rd.; cost \$5000.

Fla., Crystal Springs.—Miss Katherine Sanderson let contract to Walter Roush, Crystal Springs, to erect 3 cottages and 1 large residence at Hillsborough Villa.

Fla., Jacksonville.—J. W. Lilly, Indianapolis, Ind., let contract to J. C. Prichard, Jacksonville, to erect residence at Arlington; 2 stories; frame; asbestos slate or asphalt tile roof; cost \$4500; Mark & Sheftall, Architects, Clark Bldg., Jacksonville.

Fla., Oviedo.—Z. Spinks let contract to L. B. Moore to erect bungalow.

Ga., Millen.—Alex. S. Boyer let contract to Builders' Supply Co., Millen, to erect residence; frame; shingle roof; electric lights; cost \$4000; Hupp & Shelverton, Architects, Macon.

Ga., Macon.—R. T. Birdsey let contract to E. J. Arnold, Macon, to erect residence; 2 stories; frame and stucco; wood shingle roof; steam heat; cost \$6000; Hupp & Shelverton, Architects, Macon. (Lately noted.)

La., Isabel.—Bogue-Chitto Stock Farm Co. let contract to erect 6 additional dwellings.

Md., Baltimore.—L. Wm. Shank let contract to C. W. Littleton & Son, 4313 Liberty Heights Ave., Baltimore, to erect dwelling on Bateman Ave. between Garrison and Greenmount Aves.; 2½ stories; 27x38 ft.; frame; slate roof; hot-water heat; cost \$4000; plans by owner.

Md., Baltimore.—Henderson Duplex Cottage Co. let contract to Lorenz Schoenlein, 2217 E. Baltimore St., Baltimore, to erect two 2-story frame dwellings on Powhatan Ave.; cost \$3800; J. P. Forsyth, Archt., 232 St. Paul St., Baltimore.

Md., Catonsville.—Walter Wadsworth let contract to John M. Perego & Sons, Linwood and Merville Aves., Baltimore, to erect dwelling at 2330 Carlisle Ave.; 2½ stories; 30x45 ft.; frame.

Md., Govans.—William P. Williamson let contract to Jos. German, Arlington and Monroe Aves., Govans, to erect residence on Crowson Ave.

Miss., Clarksdale.—J. B. Hopson let contract to G. W. Chenoweth & Co., Clarksdale, to erect 6-room bungalow; cost about \$3500.

N. C., Wilmington.—Fidelity Trust & Development Co. let contract to Rhodes & Underwood, Wilmington, to erect 17 residences at Sunset Park; cost \$50,000.

S. C., Columbia.—Charlie Barron let contract to Sellers & Padgett, Columbia, to erect residence; 2 stories; brick; steam heat; hardwood floors; cost \$20,000; construction begins at once; Wilson & Sompayrac, Architects, Columbia.

Tenn., Memphis.—H. M. Woodson let contract to B. W. Cooke, Memphis, to erect residence; 1 story; 6 rooms; frame; cost \$3000; hot-water heat \$350.

Tenn., Memphis.—R. Galloway let contract to F. L. Smith, Memphis, to erect 3 residences; 1 story; 6 rooms; cost \$9000.

Tex., Abilene.—Dan T. Laughter let contract to Jack West, Abilene, to erect 5-room bungalow, servants' house and garage.

Tex., El Paso.—A. B. Dorman let contract to Mayfield Building & Improvement Co., El Paso, to erect 5-room bungalow; mission style; cost \$4750.

Tex., El Paso.—Broadus & Lee let contract to Mayfield Building & Improvement Co., El Paso, to erect 3 bungalows on Wheeling St.; cost \$18,000; construction begun.

Tex., El Paso.—E. T. Stanley let contract to Mayfield Building & Improvement Co., El Paso, to erect bungalow at Maple and Montana Sts.; cost \$2900.

Tex., El Paso.—S. J. Headfield let contract to Mayfield Building & Improvement Co., El Paso, to erect 2 bungalows on San Antonio St.; cost \$3250.

Tex., Fort Worth.—Myrtle B. Andrews let contract to M. C. Kirch, Fort Worth, to erect residence; 1 story; frame; cost \$3500.

Tex., Sherman.—John C. Dannel let contract to erect residence; 7 rooms.

Tex., Victoria.—R. H. Welder let contract to erect residence; 2 stories; 10 rooms; cost about \$15,000.

GOVERNMENT AND STATE

N. C., Wilmington.—Storehouse.—U. S. Engineering Dept. let contract at \$1350 to R. C. Hoffman, Baltimore, Md., to furnish material for storehouse on Eagle Island; 34x80 ft.; Fink truss construction; steel frame; corrugated-iron roof and sides; concrete floor. (Lately noted.)

Tex., New Braunfels.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., let contract at \$10,949 to Weston & Kroeger, San Antonio, to erect postoffice; 1 story and basement; brick and stone; composition roof; 4300 sq. ft. ground area. (Lately noted.)

Va., Front Royal.—Fire Station.—Government let contract at \$3650 to M. P. Normoyle & Son, Roanoke, Va., to erect fire station at Front Royal Remount Depot.

HOSPITALS, SANITARIUMS, ETC.

Tex., Carlsbad.—Texas Tuberculosis Commission let contract at \$57,400 to Davis Bros., Fort Worth, to erect 4 buildings at Texas Tuberculosis Sanitarium; at \$5700 to Bollinger-Petty Co., San Antonio, for plumbing; at \$5900 to Frick Co., Dallas, for refrigerating plant; buildings include 2 dormitories, subsistence building and dairy barn; reinforced concrete; fireproof; Ernest E. McAnelly, Archt., 1407 S. Southwestern Life Bldg., Dallas. (Lately noted.)

HOTELS

Ala., Montgomery.—Imperial Hotel, Mr. Wolff, Propr., will improve first floor; let contract for interior woodwork and electric lighting; soon let contract for decorating and plumbing.

Fla., Tarpon Springs.—A. Madole has plans by and let contract to N. A. Van Winkle, Tarpon Springs, to remodel buildings for hotel; wood; composition and tin roof; wood and concrete floors; cost \$10,000; steam heat, about \$1000; light from city plant; all subcontracts let. (Lately noted.)

Ga., Columbus.—Charles Loridas, Atlanta, Ga., and others will erect addition to Ralston Hotel for stores and sample-rooms; 3 stories at present; 6 additional stories (for bedrooms) later; cost \$25,000; plans in progress; Mr. Loridas, Contr.

Ky., Dry Ridge.—Lakeview Sanitarium & Hotel Co. organized with \$135,000 capital stock; A. G. Payne, Prest.; J. W. Glover, V.-P.; both of Lexington, Ky.; J. W. Stears, Secy.-Treas., Dry Ridge; acquired Kentucky Carlsbad Spring; let contract to erect 15 additional rooms to Carlsbad Springs Hotel; also acquired J. W. Stears property and Avon More Co.'s property, and plans to erect additional hotel on latter property. (Lately noted.)

S. C., Spartanburg.—Spartanburg Hotel Corp. has plans by Chas. M. Robinson, Inc., Times-Dispatch Bldg., Richmond, Va., and let contract to Longest & Tessler Co., Greensboro, N. C., to erect hotel at Morgan Sq. and King St.; 70x170 ft.; 6 stories and basement; fireproof; Barrett specification roof; concrete floors; heating not decided; city lighting; cost \$150,000. (Noted in July.)

Tex., Colorado.—Chamber of Commerce let contract to Sam Dane, Gail, Tex., to erect hotel; 2 stories; 32 rooms; brick.

MISCELLANEOUS

Fla., Safety Harbor.—Bathhouse.—D. M. Pipkin, Medello, Fla., and W. E. Sinclair, Safety Harbor, and others let contract to erect bathhouse; 2 separate departments; Lester Avery, Archt., Clearwater, Fla.

Fla., St. Petersburg.—Clubhouse.—St. Petersburg Country Club let contract to Beard-French Co., St. Petersburg, to erect clubhouse at golf links; 40x130 ft.; frame and stucco; patent shingle roof; tile floor; cost about \$20,000; Henry Du Pont, Archt., St. Petersburg. (Contract for foundation noted in October.)

Ky., St. Helene.—Clubhouse.—St. Helene Commercial Club let contract to erect clubhouse; 36x60 ft.; bungalow style; colonial front; seating capacity 250; brick and frame; cost \$5000.

Mo., St. Louis.—Home.—Memorial Home let contract to Globe Construction Co., St. Louis, to erect 85-ft. addition to building at 2609 S. Grand Ave.; 4 stories; fireproof; brick exterior; covered exterior stairway; Sam C. Black, Archt., St. Louis.

Tex., El Paso.—Barn, etc.—Gen. Felipe Angeles let contract to Perry-Kirkpatrick Co., El Paso, to erect barn and dairy at farm in El Paso Valley.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Macon.—Georgia Southern & Florida Ry. Co., J. A. Griffin, Ch. Engr., Macon, let contract to R. H. Smalling Sons, Macon, to rebuild burned office building; brick; metal roof; wood floors; steam heat; electric lights; cost \$10,000. (Lately noted.)

Tex., Mexia.—Houston & Texas Central R. R. let contract to C. J. Kaulb, Mexia, to erect depot; 25x123 ft.; brick; Johns-Manville asbestos roofing; cement floors; gas and electric lights; cost \$3000; plans by company's architect. (Lately noted.)

SCHOOLS

Ark., Little Rock.—Little Rock College let contract to T. T. Reddick, Fort Smith, Ark., to erect service building; cost \$22,473; Frank M. Blaisdell, Archt., Bankers' Trust Bldg., Little Rock. (Previously noted.)

Fla., Seminole.—School Board let contract to J. H. Miller, Clearwater, Fla., to erect school; 2 stories; 57x77 ft.; brick; metal roof; cost \$4000; Bonnell & Son, Architects, St. Petersburg, Fla. (Noted in Sept.)

S. C., Columbia.—School Trustees let contract at \$26,000 to Wm. Harbeck, Columbia, to erect school on Marion St.; at \$4,900 to H. J. Bassler, Columbia, for heating and plumbing; plans by Geo. E. LaFaye, Columbia, call for 17 classrooms; ordinary construction; Barrett specification roof; wood floor; direct steam heat; cost about \$30,000. (Lately noted.)

S. C., Florence.—School Board let contract at \$25,395 to Taylor-Waters Construction Co., Columbia, S. C., to erect Park School, and to Eltchberger Heating Co., Atlanta, for heating and ventilating; 2 stories; brick; completion by Aug. 1; W. J. Wilkins & Co., Architects, Florence. (Lately noted.)

Tex., Abilene.—State let contract to R. C. Lewis, Abilene, to erect dormitory near Abilene; 50x165 ft.; fireproof; gravel roof; cement floor; steam heat; electric light; cost \$30,000; plans by contractor. (See Machinery Wanted—Heating and Plumbing.)

Tex., Bellaire.—Harris county let contract to McKenzie & Wilder, First National Bank Bldg., Houston, to erect kitchen and sleeping porches at Harris County Girls' School; Fred C. Teich, Archt., First National Bank Bldg., Houston. (Noted in Oct. at Houston.)

Tex., Belton.—School Board, C. I. Armstrong, Secy., let contract to Mr. Ramsey, Belton, to erect school at Summers Mill; Dennison Interlocking tile construction; shingle roof; concrete and wood floors; 4 school heaters; 36x48 ft.; 2 stories; 5 rooms; cost \$3500; J. Earl Johnson, Archt., Temple. (Lately noted.)

Tex., Belton.—Armstrong School Dist. Trustees let contract to erect school; 2 stories; brick; 5 classrooms and agricultural room.

Tex., Bethel.—School Dist. let contract to J. A. Kelly, Ballinger, Tex., to erect school; 2 stories; 63x66 ft.; stone; shingle roof; wood floor; hot-air heat; cost \$9000; Sparger & Patters, Architects, Bonham, Tex. (Lately noted at Ballinger.)

Tex., Jefferson.—School Board, M. S. Wurtsbaugh, Secy., let contract to A. C. Harvey, 1123 Granger St., Fort Worth, Tex., to erect school; brick and concrete; about 80x110 ft.; 2 stories and basement; tar and gravel (Barrett specification) roof; concrete and pine floors; electric lights; cost \$5,000, including wiring and plumbing; gravity system low-pressure steam heat, \$4000; M. L. Waller, Archt., 413 Dan Wagoner Bldg., Fort Worth; construction begins Dec. 1. (Lately noted.)

W. Va., Shepherdstown.—State Board of Control let contract to Walter J. Rider Co., Charleston, W. Va., to erect dormitory; to Edward D. Mobley & Bro., Frederick, Md., for heating.

STORES

Ala., Attalla.—T. C. Banks let contract to James Weaver, Collinsville, Ala., to erect 2-story business building to replace structure previously noted damaged by fire; upper floor for offices.

Ark., Tillar.—Henry Thane, Arkansas City, Ark., let contract to erect store and bank building. (See Bank and Office.)

D. C., Washington.—Stephen I. Sheehy let contract to E. J. De Lacy, 638 C St. N. W., Washington, to erect store and flat building at 400 Georgia Ave. N. W.; 2 stories; brick; cost \$6000; J. B. Davis Palmer, Archt., 11 Warder Bldg., Washington.

Fla., De Land.—Z. T. Beilby let contract to Chas. F. Kenedy, De Land, to erect store building; red pressed-brick front; Taylors old-style tin standing seam roofing; cement

factories; electric lights; cost \$2800; Francis M. Miller, Archt., De Land. Address contractor.

Ga., Atlanta.—W. A. Fuller will erect factory brick mercantile building at 122-4 Walton St.; 45x50 ft.; Chas. W. Bernhardt, Contr., Atlanta.

Ga., Atlanta.—Lowenstein Investment Co. let contract to Mackle Construction Co., Atlanta, to erect building on Peachtree St. near Baker St.; 2 stories and basement; steel frame and concrete; 18,000 sq. ft. floor space; cost about \$18,000; will be occupied by Goodyear Tire & Rubber Co.

Ga., Tifton.—S. N. Adams, Tifton, has contract to erect building on Love Ave.; frontage 50 ft.; half 1-story for stores; balance 2 stories for moving-picture theater; interior 16x25 ft.; silica brick exterior; tin roof; tile cornice; cost \$10,000; construction under supervision of Joe Adams.

Mo., Kansas City.—E. P. and J. P. Moriarty let following contracts in connection with erection of building at Grand Ave. and Gilliam Rd.: Carpenter work, Aiken & Thayer; brick work, Chas. G. McCleary & Son; sprinkler, American Sprinkler Co.; plumbing and heating, Galloway & Geiss (Heating & Plumbing Co., Kansas City); metal windows, Henry Wels Cornice Co., Kansas City; plans by McKecknie & Trask, 1508 Grand Ave., Kansas City, call for structure 2x17 ft.; 6 stories and basement; fireproof; composition roof; cement floors; electric elevator; cost about \$100,000. (Previously noted.)

Tex., Pearsall.—Frio Lodge No. 359, A. F. & A. M., let contract to Monolithic Engineering Co., San Antonio, Tex., to erect store, office and lodge building. (See Association and Fraternal.)

Tex., Sherman.—J. C. Pyle and W. H. Lewis let contract to J. P. Crabtree, Sherman, to erect store; 50x100 ft.; brick; Carey roof; concrete floor; electric light; cost \$4000; W. A. Tockett, Archt.

THEATERS

Md., Baltimore.—Howard Amusement Co. let contract to John J. Moylan, 117 E. Center

St., Baltimore, to erect motion-picture theater at 404-6 N. Howard St.; 37x121 ft.; brick, steel and timber; composition roof; wood on concrete floor; low pressure steam heat; electric light; building, exclusive of fixtures, cost \$10,000; will install \$3000 pipe organ and general theater fixtures; Sparklin & Childs, Archts., 401 Law Bldg., Baltimore. (Lately noted.)

WAREHOUSES

Fla., Jacksonville.—Estate of M. H. Bassett let contract to O. P. Woodcock, Jacksonville, to erect warehouse to replace burned structure; brick and mill construction; gravel roof; wood floors; electric lights; cost \$12,000. (Previously noted damaged by fire.)

Ky., Carrollton.—Burley Tobacco Co. let contract to J. H. Ramey to erect addition to sales warehouse; 100x160 ft.; ordinary construction; composition roof; Fred Manley, Archt., Strand Theater Bldg., Lexington, Ky.

Ky., Lexington.—Farmers' Home Tobacco Warehouse Co. let contract to McCormick Lumber Co., Lexington, to erect addition to sales warehouse; 50x400 ft.; 2 stories; brick; mill construction; composition roof; cost \$15,000; Fred Manley, Archt., Strand Theater Bldg., Lexington. (Noted in October.)

Ky., Shelbyville.—Burley Tobacco Co. let contracts in detail to erect lately-noted addition to sales warehouse; fireproof; galvanized corrugated iron roofing; cost \$5000; also to erect building for rehandling and pricing tobacco; 65x160 ft.; ordinary construction; composition roof; electric lights; Fred Manley, Archt., Strand Theater Bldg., Lexington, Ky.

Mo., Hannibal.—Water Pierce Oil Co., St. Louis, Mo., let contract to L. M. Hager to erect warehouse, tanks and office building, and to G. W. Williams for brick work and concrete foundation.

Tex., Orange.—Orange Rice Mill Co. let contract to T. Howell, Orange, to erect rice warehouse; 100x200 ft.; galvanized iron; composition roof; wood floors. (Lately noted.)

heating, electric wiring and fixtures; for \$9000 store and office building.

Cables.—See Tractor (Stump Puller Excavator).—International Stump Puller Co.

Cableway.—John M. Greene, Drexel Bldg., Philadelphia, Pa.—Three-drum steam or electric-driven cableway; 600 to 900-ft. span; state price, details, etc.

Cans (Talcum Powder).—See Grinding and Pulverizing (Talc) Machinery.—J. E. Malloy.

Canning Plant.—Eubank Farms Co., 704 Keystone Bank Bldg., Pittsburgh, Pa.—Bids on erection and equipment of canning plant; to be ready for operation by June, 1916; will furnish data to bidders.

Cars (Mine).—See Mining Equipment, etc.—Peerless Block Coal Co.

Cars.—Altus, Lubbock, Roswell & El Paso R. Co., Houston, Tex.—Box cars. (See Railroad Construction Materials, etc.)

Cement (Asphaltic).—Purchasing Agent, Kansas City, Mo.—Bids until Dec. 21 to furnish 1000 tons asphaltic cement for one year; specifications obtainable from City Engr.

Cement (Portland).—Baltimore (Md.) Board of Awards, City Hall.—Bids until Dec. 8 to furnish Portland cement during 1916; requests alternate bids for about 75,000 bbls. cement to be furnished from Jan. 1 to June 30, and for about 125,000 bbls. from Jan. 1 to Dec. 31; R. M. Cooksey, Highways Engr.

Church Furniture.—R. W. Bass, Secy. Building Comm., St. Matthews Presbyterian Church, St. Matthews, S. C.—Contract let Dec. 7 for pulpit furniture and pews; samples required.

Clock (Tower).—Jayme Arthur Marques, Travessa do Caes do Tojo, 10 a 15, Conde Barao, Lisbon, Portugal.—Turret clock for factory; clock to have 2 dials, each about 3 ft. diam.; bell to strike hours and be heard some distance; send engraving in duplicate, best net prices f. a. s. New York, weight and time of delivery.

Clothing (Women's and Girls').—Albert Harman Co., 26 Hamilton Rd., Highbury, London, Eng.—Prices from manufacturers of gloves, stockings, underwear, dresses, etc., for women and girls; view to representation.

Coal.—Dept. of Public Finance, A. G. Ricks, Commr., New Orleans, La.—Bids until Dec. 7 to furnish Public Belt R. R. with coal for 1 year; estimated quantity, 1000 tons; specifications on file with Public Belt R. R. Com. and furnished on application.

Cold-storage Equipment.—Crawford, Jenkins & Booth, Ltd., Shreveport, La.—To correspond relative to installation of cold-storage plant.

Collars (Horse).—Larsen-Forbes Hardware Co., Valdosta, Ga.—Names and addresses of manufacturers of cloth horse collars.

Concrete Dock, Excavating Slip, Basin and Channel.—City Council, W. B. Moore, Clerk, Miami, Fla.—Bids until Dec. 23 for excavating slip, turning basin and channel across Biscayne Bay, and separate proposals for building concrete dock; quantities in dredging contract include 1,194,000 cu. yds. earth and sand and 467,000 cu. yds. rock excavation; concrete dock quantities include 460 reinforced concrete piles, averaging 25 ft. long, total length 11,500 lin. ft.; 92 reinforced concrete caps, each containing 8.6 cu. yds.; 168 reinforced concrete stringers, each 1.3 cu. yds.; 17,584 sq. ft. reinforced concrete floor slabs, 10 in. thick, 687 cu. yds.; 84 column girders, 2.3 cu. yds.; 16,380 sq. ft. reinforced sheet piling, 4 in. thick, 202 cu. yds.; cubic yard price on reinforced concrete construction to cover cost of metal and its placing. Wood: 92 anchor piles, 20 ft. long, and 92 anchor logs, 10 ft. long. Iron: 92 anchor rods, 1 1/4 in. round, 25 ft. long, with nut and washer, — lbs.; 23 cast-iron snubbing posts, with iron anchorages and anchor bolts; specifications and plans can be seen at following offices of Isham Randolph & Co., Harbor Engrs.: Room 20, Real Estate Bldg., Miami, Fla.; Suite 1310, Heard National Bank Bldg., Jacksonville, Fla.; Suite 1827, Continental Bank Bldg., Chicago; sets of plans supplied for \$6.

Concrete Block Machine, etc.—Glauco A. Bryant, Engr., 229 Sycamore St., Melvaine Bldg., Petersburg, Va.—Wants concrete block machine for 30 to 60 or 90 days; also data on concrete block manufacture, including advice as to coloring of cement mortar.

Concrete Floor.—Bluefield Bottling Co., H. M. Mitchell, Mgr., Bluefield, W. Va.—Subbids for concrete floor; 27 ft. 10 in. by

65 ft., reinforced; 150 lbs. capacity to sq. ft.; no supports except walls.

Contractors' Equipment, etc.—Chester A. Phillips & Co., Monadnock Bldg., Chicago, Ill.—Catalogues of contractors' and railroad equipment, including steam shovels, dredges, drag-lines, excavators, etc.

Cornmeal, etc.—Abram De Sola, Box 95, Curacao, D. W. I.—Correspondence with manufacturers of cornmeal; view to representation; also interested in other cereals, especially oats products of fine quality.

Corn Shuckers, etc.—See Cotton Gins, etc.—Tuleta Mercantile Co.

Cotton Gins, etc.—Tuleta Mercantile Co., J. H. Stoltzfus, Box 67, Tuleta, Tex.—Cotton gins; boiler; engine; corn shucker and sheller; baler and grinder for chops and meal for domestic purposes and feed; shafting, etc.

Cotton Mill Machinery.—Miles Spears, care Fowler Bros. Land Co., 502 Bedell Bldg., San Antonio, Tex.—Names and addresses of manufacturers of cotton mill machinery.

Crates.—See Bottling Machinery.—Fairley Bros.

Crossties.—Wilmer Bros., Box 1, Washington, D. C.—50,000 mixed oak crossties; sawn or hewn on 4 sides, 7x8 in. by 8 ft. 6 in.; sawn or hewn on 2 sides, 7x7 in. by 8 ft. 6 in.; quote price, loaded on barge or steamer, stating point and earliest delivery.

Crusher.—Lookout Paint Mfg. Co., C. B. Samuel, Pres.-Mgr., Chattanooga, Tenn.—Jaw or gyratory crusher to take material 9 to 12 in. square.

Denim.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 200,000 yds. shrunk blue denim, schedule 9057, delivery Charleston, S. C.

Derrieks.—See Well-drilling, etc.—Jennings Co-operative Oil Co.

Ditching Machinery.—W. E. Toler, Pawnee, Okla.—Data and prices on trenching machines to turn a trench 2 ft. deep and 1 ft. wide.

Drainage, etc.—Drainage Dist. No. 2, Neuces County, Robstown, Tex.—Bids until Dec. 6 for excavation of ditches and building of bridges and culverts; plans and specifications at office Drainage Commrs., Robstown; L. T. Messer, E. A. Baker and C. C. Brendle, Drainage Commrs.

Dredges.—See Contractors' Equipment, etc.—Chester A. Phillips & Co.

Drag-lines.—See Contractors' Equipment, etc.—Chester A. Phillips & Co.

Electric Fixtures.—See Building Materials, etc.—Monolithic Engineering Co.

Electric Plant Equipment.—McGowan-Bennett Milling Co., J. H. Berry, Constr. Engr., Georgiana, Ala.—Prices on generator, wire and all fixtures for complete electric plant.

Electric Motor.—S. B. Penick & Co., Marion, N. C.—Electric motor, 15 to 25 H. P., 3-phase, 60-cycle, A. C., 400 volts; good order.

Electric Plant Equipment.—Board Trustees, H. S. Bilis, Pres., Heavenier, Okla. Prices on following equipment for electric plant: Boilers, engine, 2300-volt generator, 75 K. W.; exciter; building for plant.

Electric Wiring.—See Building Materials, etc.—Geo. B. Cornell.

Electrical Machinery, etc.—Allentown Engineering Co., Hugh G. Stokes, Engr., Florence, Ala.—Data, prices, etc., on second-hand 230-volt, 25 to 50 K. W. generator; hydro-electric machinery; interurban railway equipment, etc. (Lately mentioned.)

Electrical (Mining) Machinery.—See Mining Equipment, etc.—Peerless Block Coal Co.

Elevators.—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Bids until Dec. 23 for installation electric passenger elevator in each of following buildings: United States postoffice and courthouse at Pendleton, Ore.; United States postoffice and courthouse at Brattleboro, Vt.; United States postoffice and courthouse at Ardmore, Okla.; in accordance with drawings and specifications; copies obtainable discretion Archt.

Engine.—See Cotton Gins, etc.—Tuleta Mercantile Co.

Engine (Gasoline).—See Shoe Repair Machinery.—G. C. McEachern.

Engine (Hoisting).—P. Hall, Branson, S. C.—Skidder or hoisting engine complete, with cylinder not less than 7x10 ft.; good order and cheap; also wants 30 H. P. upright boiler for skidder; give full details.

Engine (Oil), etc.—Lang Smith, Lovelady, Tex.—Will open bids May 1 on oil en-

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Acids (Salicylic and Carbolic).—See Bromide of Potassium, etc.—C. J. Lindemann.

Air Compressor.—American Silica Sand & Mining Co., Geo. D. De Buchananne, Pres.-Mgr., Hereuleaneum, Mo.—Prices on air compressors.

Asphalt Plant.—Thaw & Williams, 202 Bell Block, Cincinnati, O.—Full specifications and lowest cash price on 1000 sq. yd. capacity portable asphalt plant, complete with dryers; consider only used machine.

Automobiles.—Arrow Jitney Co., I. C. Yates, Mgr., Wake Forest, N. C.—Data and prices on 10 to 20-passenger automobiles.

Baler.—See Cotton Gins, etc.—Tuleta Mercantile Co.

Boiler.—See Engine (Oil).—Lang Smith.

Boiler.—See Cotton Gins, etc.—Tuleta Mercantile Co.

Boiler.—See Engine (Hoisting).—P. Hall.

Boilers.—American Silica Sand & Mining Co., Geo. D. De Buchananne, Pres.-Mgr., Hereuleaneum, Mo.—Prices on boilers.

Boilers.—Mayor and City Council, Orangeburg, S. C.—Bids until Dec. 3 to furnish, deliver and erect, on foundation provided by city, two 275 H. P. water-tube boilers for working pressure 160 lbs. gauge; bidders to name prices on complete boilers delivered, complete boilers delivered and erected and list of valves, fittings, etc.; each bidder also request to propose boilers owned by their standard form of specifications and of their regular rating and variation of 5 per cent. from 275 H. P. will be acceptable; consider proposals on both horizontal and vertical boilers; T. O. S. Dibble, City Clerk and Treas.

Bottling Machinery.—Fairley Bros., Orangeburg, S. C.—Complete equipment bot-

tling machinery, including filters, crates, bottles, trucks, etc.

Bridge Construction.—Oklahoma County Commrs., M. Cornelius, Clerk, Oklahoma City, Okla.—Bids until Dec. 7 to construct 2 bridges; separate contracts; plans and specifications on file with County Clerk; W. J. Peshek, Deputy.

Bridges and Culverts.—See Drainage, etc.—Drainage Dist. No. 2, Neuces County, Robstown, Tex.

Bridges.—Mississippi County Osceola and Little River Road Improvement Dist. No. 1, Osceola, Ark.—Bids until Dec. 1 to construct 9 steel bridges.

Bromide of Potassium, etc.—C. J. Lindemann, 600 Seaboard Bank Bldg., Norfolk, Va.—Correspondence (for client in Copenhagen, Denmark) with American manufacturers of or wholesale dealers in bromide of potassium and sodium and other bromides; salicylic acid and carbolic acid; tin and tinned lead tubes (for cosmetics, tooth paste, etc.); for representation.

Broom Corn and Supplies.—China Grove Broom Co., A. G. Deal, Mgr., China Grove, N. C.—Prices on broom corn and supplies for broom manufacture.

Building Materials.—See Mining Equipment, etc.—Peerless Block Coal Co.

Building Materials, etc.—Monolithic Engineering Co., San Antonio, Tex.—Prices on metal ceilings, plate and prism glass, metal settings, marble and tile, metal lath and studs or plaster partition blocks, electric fixtures, fire escapes; for \$10,000 store, office and lodge building.

Building Materials, etc.—Geo. B. Cornell, Box 508, Hazard, Ky.—Prices on architectural front brick, red common brick, steel, rough lumber and trim, plumbing and

gine, about 100 H. P., or return tubular boiler, 80 H. P.

Engines (Traction, Steam and Gasoline).—See Tractor (Stump Puller Excavator).—International Stump Puller Co.

Excelsior Machinery.—J. C. Vest, Vest Excelsior Co., Ooltewah, Tenn.—Prices on excelsior machinery.

Excavators.—See Contractors' Equipment, etc.—Chester A. Phillips & Co.

Filter Presses.—Geo. J. Adams, Consult. Engr., 39 South St., corner Old Slip, New York.—Second-hand filter presses, oil storage tanks, 3000 to 4000 gals. each.

Fire Escapes.—See Building Materials.—Monolithic Engineering Co.

Grinder.—See Cotton Gins, etc.—Tuleta Mercantile Co.

Grinding and Pulverizing (Tale) Machinery.—J. E. Malloy, P. O. Box 267, Cochrane, Alberta, Canada.—Correspondence with manufacturers of machinery for grinding tale for face powder; also cans.

Hardware, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on following hardware, etc., schedule 9055: Chisels, delivery Norfolk; 72 breast drills, delivery Boston; 12 electric portable radial drills, 35 gross brass grommets and miscellaneous hacksaw blades, delivery Brooklyn; hammer handles, delivery Boston, Norfolk; pliers, delivery Boston, Philadelphia; screws, delivery Brooklyn, Charleston; 50 gasoline torches, delivery Philadelphia.

Heating and Plumbing.—R. C. Lewis, Abilene, Tex.—Prices on heating and plumbing material for \$30,000 dormitory.

Hose.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 7000 ft. rubber air hose, delivery Portsmouth, Philadelphia; 5000 ft. rubber-lined cotton fire hose, delivery Norfolk, Va.; both schedule 9053.

Ice Machinery.—J. H. Berry, Constr. Engr., McGowan-Bennett Milling Co., Georgiana, Ala.—Prices on machinery (except engine and boiler) for 10-ton ice plant.

Iron Bender.—Jay Dillenback, East Rochester, N. Y.—Angle iron bender; hand or power.

Knitting Machinery, etc.—W. J. Bermyan, Edenton, N. C.—To correspond with manufacturers of knitting mill machinery and of hosiery yarns.

Knitting Machinery.—Miles Spears, care Fowler Bros. Land Co., 502 Bedell Bldg., San Antonio, Tex.—Names and addresses of manufacturers of knitting machinery.

Knitting Equipment.—Robinson-McGill Mfg. Co., Shelbyville, Tenn.—Equipment for daily capacity 100 doz. men's heavy ribbed underwear, using No. 9½ single hosiery yarn on cones.

Lathe.—Ralph J. Barr, Troy, Ala.—Lathe with 10-ft. bed and 16-in. swing; quick gear change.

Levee Work and Dredging.—Hall Nattin, Shreveport, La.—Bids on 40,000 yds. open field levee work, 14 cents per yd.; also 300,000 yds. dredge work, no clearing, 11 cents per yd.; will furnish details.

Locomotive.—John M. Greene, Drexel Bldg., Philadelphia, Pa.—Switching engine; 50 tons; 4 driver; state price and details in first letter.

Locomotive.—E. Francis McCrossin, 506 American Trust Bldg., Birmingham, Ala.—Standard gauge locomotive; 40 to 50 tons; 8 wheels; price f. a. s. New York, Norfolk or New Orleans.

Locomotive.—Altus, Lubbock, Roswell & El Paso R. R. Co., Houston, Tex.—Locomotive. (See Railroad Construction Materials, etc.)

Lumber.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 5500 lin. ft. white oak piles and 2016 lin. ft. yellow pine piles, schedule 9047, delivery Philadelphia; 51,000 ft. yellow pine, schedule 9044, delivery Boston; 40,000 sq. ft. Southern spruce boards, schedule 9043, delivery Brooklyn.

Metals.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on following, schedule 9042, delivery Washington: Naval rolled bar brass, 1250 lbs. commercial sheet brass, 62,400 lbs. steel angles, miscellaneous machinery steel and 24,000 lbs. sheet steel; also bids on 100,000 lbs. ingot copper and 100,000 lbs. slab zinc, schedule 9050, delivery Philadelphia.

Mining Equipment.—Peerless Block Coal Co., Jaius Collins, Mgr., Bramwell, W. Va.—Prices on equipment for daily output 1500 tons coal; equipment to include mining machinery, electrical equipment, power plant, tipple, steel rails, building materials, etc.

Mixer (Concrete).—See Sand, Cement and Tile.—C. L. Robinson.

Oil Mill Machinery.—Salamy & David, manufacturers' agents, 40 Wall St., New York.—Names and addresses of manufacturers of machinery to separate cottonseed from the knots and extract the oil from the seed.

Oils, Paints, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 50,000 lbs. soda ash, schedule 9054, delivery Brooklyn, N. Y.; 550 gals. castor oil, schedule 9056, delivery Boston; 25,000 lbs. dry Venetian red and 1000 gals. aluminum varnish, schedule 9054, delivery Norfolk.

Paving.—Board of Public Works, D. B. McKay, Chrmn., Tampa, Fla.—Bids until Dec. 7 to construct sheet cement sidewalks in Osewana subdivision on Fremont Ave.; plans and specifications on file with Board.

Pipe.—W. E. Toler, Pawnee, Okla.—Wants wired (night letter) delivered prices on following new and second-hand gas pipe: 4½ in. 8-in. and 28 in. 6-in. high-pressure gas main; 6 in. 6-in. low-pressure gas main; 20,000 ft. 4-in., 37,000 ft. 3-in., 37,000 ft. 2-in., 4860 ft. 2½-in. and 8000 ft. 1-in. low-pressure gas main. Give price each amount separate, delivered Oklahoma; same freight as Pawnee.

Pipe.—See Well-drilling Equipment, etc.—Eastfields Oil Co.

Planer.—"Machine Tools," care Manufacturers Record, Baltimore, Md.—22 or 24 light pattern second-hand planer with 5-ft. or 6-ft. tables.

Power Plants.—J. V. Boland Construction Co., 1201 Chemical Bldg., St. Louis, Mo. (contractors, and brick and concrete chimney builders).—Wants data on power plants, etc.

Power Plant.—See Mining Equipment, etc.—Peerless Block Coal Co.

Rails.—See Mining Equipment, etc.—Peerless Block Coal Co.

Rails.—John M. Greene, Drexel Bldg., Philadelphia, Pa.—All size rails; second-hand; state price, condition, shipping point, etc.

Railway Equipment.—See Electrical Machinery, etc.—Allentown Engineering Co.

Railroad Equipment.—See Contractors' Equipment, etc.—Chester A. Phillips & Co.

Railroad Construction Materials, etc.—Altus, Lubbock, Roswell & El Paso R. R. Co., Houston, Tex.—Railroad construction materials; also locomotive, box car, etc.

Revetment.—Board of State Engrs., New Orleans, La.—Bids until Dec. 8 to construct following revetment work in Plaquemines parish, Mississippi River, right bank: Happy Jack to Butler levee, 2 sections, 5600 lin. ft.; Butler to Melrose levee, 2 sections, 8000 lin. ft.

Road Construction.—Chas. E. Gross, Dallas County Auditor, Dallas, Tex.—Bids until Nov. 29 to surface Dallas-Garland Rd. for 2 mi. near Garland; gravel.

Road Construction.—Lee County Commissioners, Opelika, Ala.—Bids until Dec. 27 to grade, drain and surface with sand-clay and top soil part of Opelika and West Point Rd.; expenditure \$11,585.52; W. S. Keller, State Highway Engr., Montgomery, Ala.

Road Construction.—Comms. Mississippi County Osceola and Little River Road Improvement Dist. No. 1, Osceola, Ark.—Bids until Dec. 1 to construct 29.5 mi. concrete road and 9 steel bridges; plans and specifications on file with Pride & Fairley, Engrs., Osceola.

Road Construction.—Greene County Comms., J. C. Exum, Chrmn., Snow Hill, N. C.—Bids until Dec. 6 to construct sand-clay roads to amount of \$32,500.

Road Construction.—Comms. of Public Works, D. B. McKay, Chrmn., Tampa, Fla.—Bids until Dec. 7 to repair North Blvd. from Grand Central Ave. to brick pavement in front of Gordon Keller Hospital and construct driveway to Gordon Keller Hospital; information and specifications obtainable from City Engr.

Road Construction.—Knox County Good Roads Com., Knoxville, Tenn.—Bids until Dec. 15 to rebuild Kingston Rd. from corporate limits of city of Knoxville to Eastern Insane Asylum, 1 m. on Sevierville Rd. and 1 mi. on Broadway Rd.; bids on concrete, tar and macadam (hot mixed and penetrating), asphalt or other suitable material for permanent roads.

Road Construction.—Baldwin County Comms., Courthouse, Bay Minette, Ala.—Bids until Dec. 14 to grade, drain and surface with sand-clay part of Eastern Shore Rd.; about 10 mi.; expenditure \$11,585.52; J. M. Garrett, Engr., Montgomery, Ala.

Road Construction.—Wright-Johnstone Contracting Co., Bryson City, N. C.—Will let

contract to construct 100,000 cu. yds. highway to competent contractors who can furnish bond.

Road Construction.—Monroe County Board of Revenue, Monroeville, Ala.—Bids until Dec. 27 to grade, drain and surface with gravel part of Old Federal Rd., beginning where State-aid road ends and extending to Burnt Corn through Monroeville to Hadley; P. W. Turner, County Engr.

Road Construction and Machinery.—Clinton County Comms., Court, C. B. Parrigin, Chrmn., Albany, Ky.—Bids received Nov. 30 to construct 22 mi. waterbound macadam road; plans and specifications obtainable for \$5 from F. S. Parrigin, Engr., Albany; also opened bids for following: Leaning wheel grader; gasoline roller having pressure of 250 lbs. per in., cylinders of the horizontal opposed type, capable of propelling machine up at least 20 per cent. grades, and of three-wheel type, or, optional, prices on steam roller of same weight and tractive effort; these machines to be warranted for one year; 9x16-in. jaw crusher with screen in three sections, to give stone passing ¾-in. ring, 2-in. ring, and 2-in. up; portable gasoline engine, 16 H. P., with connections and tank for air reservoir to run rock drill; rock drill, air driven, with bits 24 in., 36 in. and 48 in. long; six-wheel scrapers, about 9 to 13 cu. ft., and five drag scrapers of 6 cu. ft. capacity. (Lately noted.)

Road Machinery.—Belcher Asphalt Paving Co., Miami, Fla.—Prices on road-building machinery, including oil sprinkler, scarifier, roller, etc.

Road Machinery.—International Stump Puller Co., R. L. Beasley, Gen. Mgr., Dothan, Ala.—Prices on general line of roads machinery; view to agencies.

Sand, Cement and Tile.—C. L. Robinson Ice & Cold-Storage Corp., Winchester, Va.—Will need sand, cement and tile; also concrete mixer.

Scales (Platform).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 6 portable platform scales, schedule 9057, delivery Philadelphia.

Sewer Construction.—Constructing Quartermaster, Fort Sam Houston, Tex.—Bids until Dec. 14 to construct sewerage system and sewage-disposal plant; information on application.

Sewer Construction.—Baltimore (Md.) Board of Awards, City Hall.—Bids until Dec. 8 to construct lateral sewers in Dist No. 38-A, Sanitary Contract No. 172; \$300 lin. ft. 8-in. to 12-in. vitrified-pipe sewer and 2500 lin. ft. vitrified-pipe house connections; plans on file with Ch. Engr. Sewerage Com.; specifications and plans obtainable from Harry W. Rodgers, Secy. Sewerage Com., 904 American Bldg., for \$5.

Sewer Construction.—City of Houston, Tex., Office of City Secy.—Bids until Dec. 4 to construct storm sewer on Paschal St. from N. Main to Cochran St. with laterals and appurtenances; storm sewer at White Oak and Florence Aves.; Burnett St. storm sewer system; outfall for Caroline St. storm sewer and other work on said sewer; separate bids on each sewer; specifications and information obtainable from E. E. Sands, City Engr.; Ben Campbell, Mayor.

Sewer Construction.—Board of Commissioners, J. W. Dashiell, Secy., Nashville, Tenn.—Bids to construct 18-in. clay pipe trunk sewer with catch-basins, manholes, connections, etc., from and connecting with trunk sewer in 4th Ave. at Cedar St. and extending to point near 5th Ave. N.; plans and specifications on file with City Engr.; bids until Nov. 30; Robt. Ewing, Mayor.

Shafting.—See Cotton Gins, etc.—Tuleta Mercantile Co.

Shaper.—"Machine Tools," care Manufacturers Record, Baltimore, Md.—Single-gear 15-in. or 16-in. second-hand shaper, vertical travel of table about 14 in.

Shoe Repair Machinery.—G. C. McEachern, Timmonsville, S. C.—Prices on equipment for shoe repairing shop; operation by gasoline engine.

Sprinklers (Oil).—See Road Machinery.—Belcher Asphalt Paving Co.

Steel Shapes, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Wash-

ington, D. C.—Bids until Dec. 15 to furnish steel shapes, grommets, rivets and bars, portable forges, garbage cans, garbage covers, water coolers, marine clocks, marine lights, life preservers, oars, oarlocks, life tongs, chair seats, tablecloths, chinaware, towels, leather fillets, asbestos cement, rubber bands, paper drinking cups, level books, and paper; blanks and general information relating to this circular (No. 994) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Steam Shovels.—See Contractors' Equipment, etc.—Chester A. Phillips & Co.

Stone-cutting Machinery.—Brum Mountain Millstone Co., Blacksburg, Va.—Will open bids Dec. 1 on stone-cutting machinery; estimated cost \$3000.

Sugar.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids on 1500,000 lbs. sugar in sacks, schedule 9053, delivery Boston, Brooklyn, Norfolk, Philadelphia.

Tile.—See Sand, Cement and Tile.—C. L. Robinson.

Tipple (Coal) Equipment.—See Mining Equipment, etc.—Peerless Block Coal Co.

Traction Engine (Gas).—J. E. Caldwell, Cambria, Va.—Good second-hand gas tractor; Hottel caterpillar preferred.

Tractor (Stump Puller Excavator).—International Stump Puller Co., R. L. Beasley, Gen. Mgr., Dothan, Ala.—Special steam or gasoline, 40 H. P., 3-drum, link-motion, all-steel stump puller excavator tractor, built of open-hearth steel castings weighing about 6 tons, that will be guaranteed to stand 50-ton pull on either side of front drums at same time, thus developing 10 tons pull on frame of engine at one pull, divided equally on 2 special patent drums owned by the company; operation by square jaw clutch transmission, using about 4½ shafting for the drums; also wants quotations on cables of best grade from ¾-in. to 2-in. diam.

Trucks.—See Bottling Machinery.—Fairly Bros.

Tubes (Tin and Tinned Lead).—See Bromide of Potassium, etc.—C. J. Lindemann.

Vault Work.—Palm Beach County Commissioners, F. E. Encell, Chrmn., West Palm Beach, Fla.—Bids until Dec. 7 to furnish and install steel vault work in new courthouse; plans and specifications on file with Geo. O. Butler, Clerk of Circuit Court; bids to be based on entire equipment.

Water Main.—City Comms., Galveston, Tex.—Bids until Dec. 9 to construct submerged 30-in. cast-iron water main, about 900 ft. long, across part of Galveston Bay; city to furnish pipe, fittings and specials and deliver same to contractor f. o. b. cars Galveston; contractor to furnish all other material, labor, tools and appliances; plans and specifications on file with A. T. Dickey, City Engr., City Hall.

Water-wheels.—See Electrical Machinery, etc.—Allentown Engineering Co.

Water-works.—City of East Youngstown, O.—Bids on complete water-works, according to plans and specifications of Chester & Fleming, Pittsburgh, Pa.; plans obtainable from engineers for \$25; work consists of 1,000,000-gal. mechanical filter plant, gas engine-driven pumping station, cast-iron distributing system, steel storage tank, tools, etc. (Lately noted.)

Well-drilling Equipment, etc.—Eastfields Oil Co., 1118 Colcord Bldg., Oklahoma City, Okla.—Prices on well equipment, pipe, power equipment, etc.; will purchase from time to time.

Well-drilling, etc.—Jennings Co-operative Oil Co., J. J. Fitzpatrick, Pres., Jennings, Okla.—Will open drilling bids Feb. 1; also bids on derricks Jan. 15.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Altoona.—Louisville & Nashville R. R. Co. is reported contemplating construction of a spur 3 mi. long from Altoona to Walnut Grove. H. C. Williams, Louisville, Ky., is Ch. Engr. of Constr.

Ala., Mobile.—Tidewater Securities Corp. has graded its railroad from Alabama Port

to Cedar Point, 3.2 mi. T. W. Nichol of Mobile is Ch. Engr.

Ark., Pine Bluff.—Pine Bluff & Northern Ry. Co. proposes to build next year an extension from Culler to Pine Bluff, 35 mi. C. F. Harwell is V.-P. and Gen. Mgr. at Little Rock, Ark.

Fla., Chipley.—Birmingham, Columbus & St. Andrews Bay Ry. Co. proposes to build

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extensions from Chipley to Graceville, Fla., 12 mi.; also from Southport to Bankers Cove, Fla., 23 mi. J. M. Owsley of Chipley and others are interested.
Fla., Fincher.—J. F. Lamb of Thomasville, Ga., has contract for a new connection of about 1.3 mi. between the Monticello branch and the Panlaw branch of the Atlantic Coast Line near Fincher. Construction is in progress.
La., Alexandria.—Vicksburg, Alexandria & Southern Ry. Co. contemplates building next year an extension from Thomas to Harrisonburg, 50 mi. A. D. Alderson is Gen. Mgr. at Alexandria.
Ga., Atlanta.—Georgia Ry. & Power Co., P. S. Arkwright, Pres., denies late report that it proposes to build an interurban railway from Atlanta to Roswell, Crabapple and Alpharetta.
Ga., Byronville.—Construction is under way on the Americus, Hawkinsville & East-ern Ry., which proposes to build from Games, near Byronville, to Hawkinsville, 27 mi. northeast; also from the Flint River to Americus, 18 mi. southwest. J. S. Morton of Byronville is Gen. Mgr.
Ga., Perry.—Ocella Southern R. R. is surveying for its proposed extension from Perry to Macon, about 30 mi. J. A. J. Henderson of Ocella, Ga., is Pres.
Ky., Whitesburg.—Louisville & Nashville R. R. Co. is expected to build a coal mine extension to the property of the Mineral Development Co. of Philadelphia, 5 mi. above Whitesburg, on Colly Creek. H. C. Williams, Louisville, Ky., is Chief Engr. of Constr.
La., New Iberia.—New Iberia & Northern R. R. Co., R. J. Lockwood, V.-P. and Gen. Mgr., is considering construction of line from Oaklawn to New Orleans, 93 mi.; also from Port Barre, La., to the Sabine River, 10 mi., with branches to the salt mines at Weeks and Avery Islands.
Md., Baltimore.—Pennsylvania R. R. contemplates improving its tunnel between Union and Fulton stations, lowering the tracks and widening the tube. A. C. Shand, Broad Street Station, Philadelphia, is Chief Engineer.
Mo., Ava.—Kansas City, Ozarks & Southern Ry. contemplates an extension of per-haps 30 mi. August Heman of St. Louis and others are interested. John W. Byng, Ava, is Gen. Mgr.
N. C., Andrews.—Hilawasee Valley R. R. Co. has accepted a proposition from J. N. Baker and A. M. Cook of Harriman, Tenn., to complete the line and put it in operation within eight months. O. L. Anderson is Pres.
N. C., North Wilkesboro.—Watauga & Yadkin River R. R. Co., which has built from Denny to Darby, N. C., 4 mi., proposes to build next year a further extension from Darby to Rogers Mill, also possibly to Boone, 3 mi. H. C. Landon, North Wilkesboro, is Gen. Mgr.
N. C., Townsville.—Roanoke River Ry. Co. is considering plan to build a line from Townsville to some point on the Southern Ry., 11 mi. G. W. Marrow is Pres. and Gen. Mgr. at Townsville.
Okla., Bartlesville.—The Indian Territory Illuminating Oil Co. of Bartlesville is reported as making announcement that it will have survey made soon for the projected interurban railway to Pawhuska, about 20 mi.
Okla., Clinton.—Clinton & Oklahoma Western Ry. may build an extension from Clinton to Colony, Okla., 30 mi. Construction not yet decided upon. W. S. Hald is Gen. Mgr. at Clinton.
Okla., Oklahoma City.—Oklahoma Ry. Co., it is reported, will build next year its contemplated extension from Edmond to Guthrie, 15½ mi. John W. Shartel of Oklahoma City is Pres.
R. C., Walterboro.—Atlantic Coast Line is building a 4½-mi. extension of the Holly-wood spur, the W. Z. Williams Co. of Ma-ry, Ga., being the contractor.
Tenn., Chattanooga.—Chattanooga Traction Co. has begun grading on extension to Blount, 7 mi. C. E. James and others of the Chattanooga Estate Co. are interested.
Tex., Asherton.—Asherton & Gulf Ry. Co. proposes to build an extension from Asherton to Eagle Pass, Tex., 62 mi., and efforts will be made to promote its early construction. L. V. Richardson of Asherton is Pres. and Gen. Mgr.
Tex., Galveston.—Officers of the Southern Pacific lines contemplate making some ter-minal improvements at Galveston, but their extent and character are not yet announced. W. R. Scott, Houston, Tex., is Pres.

Tex., Galveston.—Gulf, Colorado & Santa Fe Ry. is reported to have let contract to the L. J. Smith Construction Co. of Kansas City to grade 23½ mi. of the Gulf & Inter-state Ry. which was wrecked by storm. F. Merritt, Galveston, is Ch. Engr.
Tex., Lubbock.—The Altus, Lubbock, Roswell & El Paso R. R. Co. proposes to start construction on its line between Lubbock and Memphis, Tex., about 100 mi., not later than Jan. 15. E. C. Noble, Houston, Tex., is Pres. and Gen. Mgr.
Tex., Marlin.—The Marlin-Temple Inter-urban Promotion Co. has been organized to advance plans for the projected interurban railway to connect Marlin and Temple, 30 mi. apart. G. W. Glass is Pres.; George Harter of Temple, V.-P.; T. A. Cheeves, Treas.; W. W. Turner, Secy.; S. D. Hanna of Temple, Ch. Engr. and Supt.
Tex., Orange.—The Luther & Moore Lum-ber Co. of Orange will extend its line, the Gulf, Sabine & Red River R. R., for 35 mi. from its northern terminus in Louisiana and cross the Santa Fe line near Merryville, be-sides going to near Stables and Leesville, La.
Va., West Point.—Contract for the con-struction of the Richmond, Rappahannock & Northern R. R. from West Point to Urbanna, Va., 17 mi., is reported let to the Central

Construction Co. of Harrisburg, Pa. C. L. Ruffin, 514 American National Bank Bldg., Richmond, Va., is Ch. Engr.
W. Va., Morgantown.—Morgantown & Wheeling Ry. Co. has graded 7.45-mi. exten-sion from Price to Blacksville and track is to be laid next year. J. Ami Martin is Gen. Mgr. at Morgantown.
W. Va., O'Keeffe.—Big Sandy & Cumber-land R. R. Co. proposes to build next year a line from Matney to Grundy, Va., 10 mi. A. A. Kopp is Gen. Mgr. at O'Keeffe.
W. Va., Princeton.—Construction is fast nearing completion on the Princeton & Blue-field electric railway, 12 mi., and it is ex-pected that it will be ready for operation by Jan. 1. S. J. Evans is president of the Princeton Power Co., which is building the road.
Ark., Little Rock.—Little Rock Ry. & Electric Co. has under consideration proposi-tions to extend its lines in several direc-tions, but no decision is made. D. H. Can-trell is Pres.
W. Va., Charleston.—The Summer Street Realty Co. will, it is reported, build a street railway in Charleston. Capital \$25,000. J. S. Hill, R. G. Hubbard and others are in-corporators.

An article entitled "Installation of Oil En-gine Simple as Compared with Steam," by W. H. Callan, manager of the company's Franklin (Pa.) compressor and engine plant, tells how the problems presented by a break-down of the main power plant were solved by installing over-night "Giant" oil en-gines, which successfully met the emergency of supplying power until repairs could be made. Illustrations are given in the pub-lication of different applications of Giant oil engines and Hummer self-rotating ham-mer drills manufactured by the company, together with diagrams and description of Duntley electric drilling stands. Several pages of the November issue of "Ideal Power" are devoted to Little Giant auto-mobile trucks.

Convention of Sales Managers.

The eighth convention of the sales man-agers of the Electric Storage Battery Co. of Philadelphia was held recently at the Belle-vue-Stratford Hotel of that city. Among the managers in attendance were those from New York, Boston, Chicago, Cleveland, San Francisco, Denver, St. Louis, Detroit, Pitts-burgh, Atlanta, Washington, Rochester and Pennsylvania sales offices. The convention lasted for a week, with the sessions starting at 9.30 A. M. and closing at 5.30 P. M. They were presided over by the president and general manager, Herbert Lloyd. Papers bearing upon the development of various fields of storage-battery service were pre-sented by engineers and department heads of the general office, and a number of subjects were discussed concerning important matters pertaining to the different territories. The visitors devoted their entire time to the business of the convention, with the excep-tion of Wednesday afternoon, which was given over to golf, and the evenings were made attractive by a series of entertain-ments, one of which was an informal affair at the residence of Charles Blizard, the third vice-president and sales manager of the com-pany.

Vilter Refrigerating Installations.

Recent installations of ice-making and re-frigerating equipment manufactured by the Vilter Manufacturing Co. of Milwaukee, Wis., have been made for the following con-cerns: The Andalusia (Ala.) Packing Co., one 60-ton refrigerating plant, including a 5-ton ice-making plant; The American Ice Co., Station 16, Baltimore, Vilter gravity feed system; Vacaroo Brothers, New Orleans, improvements in their Celba Spanish Hon-duras plant by installation of 250 feet of 2-inch full weight black steel piping com-plete with hangers, hanger bars, etc.; The Bainbridge (Ala.) Ice Co., three coils double pipe type brine coolers, each coil 12 pipes high by 18 feet long; The Fuhrman & Schmidt Brewing Co., Shamokin, Pa., a 96-ton refrig-erating machine and high-pressure side; The Yuma (Ariz.) Ice Co., a 50-ton raw water ice-making plant; Pittsburgh (Pa.) Brewing Co., two coils, atmospheric ammonia con-densers, each coil 24 pipes high by 20 feet long; Holton Power Co., El Centre, Cal., 24,000 feet 1½-inch full weight black steel brine piping, complete with all headers and connections; Uhl's Brewery, Bethlehem, Pa., a 65-ton refrigerating machine and high-pressure side; McCow Ice Cream Co., Sha-mokin, Pa., a 10-ton refrigerating plant; The Randolph Bros. Hotel Co., Milwaukee, for the Charlotte Hotel of that city, one 3-ton refrigerating plant; Diamond Glue Co., Chicago, Ill., 56 naphtha cooling coils; Iowa Brewing Co., Iowa City, Ia., one cau ice tank with necessary piping, etc.; Cres-cent Creamery Co., Los Angeles, Cal., a 6000-pint bottle capacity per hour "Badger" milk pasteurizer; Morris & Co., Chicago, im-

[Continued on Page 84.]

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, build-ing operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or sub-scribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

New Burdett Oxygen Plant.

The Burdett Oxygen Co., Chicago, will complete its Fort Worth (Texas) branch plant about Dec. 15. This plant is designed to supply the Texas trade with electrolytic oxygen 99½ per cent. pure. It is the ninth erected by the Burdett management in the various industrial centers of the country.

Prepared for Predicted Business Revival.

Anticipating a coming rush of business, the Climax Manufacturing Co. of Corry, Pa., announces it is now in shape to handle advantageously for its customers large or-ders for Climax geared locomotives. In this connection the company advises it has on hand completed and ready for shipment in less than a week after receipt of order one each of its 35, 45, 50 and 55-ton, Class B, locomotives and one 22-ton, Class A, loco-motive.

Jeffrey Branch for Milwaukee.

Announcement of the opening of a new branch office in the M. & M. Building, Mil-waukee, Wis., is made by the Jeffrey Manu-facturing Co. of Columbus, O. The office will be in charge of A. K. Dufour, whose long experience and training in the appli-cation of Jeffrey products will enable him to be of great assistance to customers in solving their elevating, conveying and trans-mission problems.

Plant Extensions for Anasco Company

Increasing demand for the products of the Anasco Company of Binghamton, N. Y., manufacturer of photographic apparatus, cameras, films, etc., has made it necessary to provide additional manufacturing facili-ties. Contract for the engineering and con-struction of extensions and improvements to the company's power plant has been awarded to The J. G. White Engineering Corporation of New York.

Represents Manufacturers in Atlanta Territory.

Roland B. Hall, Jr., who for several years represented the Harrisburg Foundry & Ma-chine Works in Atlanta, going from there to manage its New York office, has severed his connection with that concern and has returned to Atlanta to act as the Southern manager for the Ames Iron Works, Oswego, N. Y., manufacturers of engines and boilers. The Consolidated Engineering Co. of Chi-cago and Boston, manufacturer of the Van Auken and Thermograde systems of vacuum and low-pressure steam heating, will also be represented by Mr. Hall in the Atlanta ter-ritory.

New Detroit Quarters for Western Electric Co.

Detroit headquarters of the Western Elec-tric Co. of New York has been moved from 263 Franklin St. to Kirby and Dequindre Sts., from which address all activities in the Detroit territory will be carried on. The change has been occasioned by a consistently healthy business growth, which reached proportions whereby the Franklin St. location became inadequate. The new building is two stories high, and has a frontage of 150 feet and a depth of 130 feet adjoining the Grand Trunk Railway in the section that forms a part of the inner belt railway of Detroit. The total floor space is 50,000 square feet, and the yard, with an area of 54,000 square feet, is large enough to accommodate stocks of cross-arms, clay conduit and poles. The new building is strictly up to date, with every appliance to facilitate quick handling of merchandise, which assures the continu-ance of first-class Western Electric service from Detroit.

To Manufacture Sheet Metal Specialties.

Several small companies, the principal one of which is the Eureka Specialty Co., with plants at Ludlow, Ky., and Greenfield, O., have been consolidated and incorporated un-der the name of the Cincinnati Can Co., with a capitalization of \$100,000, by interests iden-tified with the Edwards Manufacturing Co. of Cincinnati. New additions will be made to the plant at Carthage Pike and the Big Four Railroad, Cincinnati, which is to be occupied by the new company, and a force of 200 men is to be employed in the manu-facture of sheet metal specialties, including oil cans, ice-cream freezers and other mis-cellaneous specialties. It is stated that the plans of the organizers contemplate enlarg-ing and extending the business to a consid-erable extent. Incorporators of the company are E. W. Edwards, president; H. W. Ed-wards, vice-president; O. S. Larkly, secre-tary; G. D. Myers, treasurer; J. C. Miller, superintendent of the plant; H. A. Green-ing, sales manager; G. R. Edwards, Morgan Wamsley and Daniel McLaren. The Cin-cinnati Can Co. advises it has a first-class proposition to offer specialty salesmen on a commission basis, and will be pleased to fur-nish particulars on request.

Chicago Pneumatic Tool Co.'s Products.

In the November number of "Ideal Power," the monthly house organ of the Chicago Pneumatic Tool Co. of Chicago, are found many articles of interest to power users.

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Birmingham.—Alabama Rural Credit Association, capital \$1,000,000, is organized for the purpose of lending money to farm-ers. L. B. Musgrove will be Pres.; H. E. McCormick, V.-P.; Arthur G. Lund, V.-P. and Gen. Mgr., and John H. Bankhead, Gen. Counsel.
Ark., Hope.—Citizens' Savings & Trust Co. chartered; capital \$50,000; R. A. Lagrone, Pres.; R. M. Briant, V.-P.; W. P. Agee, Sec.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Merchants-Mechanics National Bank

South and Water Sts., BALTIMORE, MD.
DOUGLAS H. THOMAS, President.
JNO. B. RAMSAY, V.-P. and Chm. Bd. of Dir.
JOHN B. H. DUNN, Cashier.
Capital \$2,000,000. Deposits \$21,678,000.
Surplus and Profits \$2,175,000.
Accounts of Banks, Bankers, Corporations and Individuals solicited.
We invite correspondence.

The National Exchange Bank

OF BALTIMORE, MD.
Hopkins Place, German and Liberty Sts.
Capital, \$1,500,000.
March 30, 1915, Surplus and Profits, \$850,000.00.
OFFICERS:
WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

We Buy Bonds

City, County, School and Road, from Municipalities and Contractors.
WRITE
THE PROVIDENT SAVINGS BANK & TRUST CO.
CINCINNATI OHIO

WE BUY County, City, School, Road or Drainage District Bonds.

21 Years' Experience
M. H. CUTTER & CO.
The Rookery CHICAGO

First National Bank

RICHMOND, VIRGINIA
Capital and Surplus - - - - \$3,000,000
JNO. B. PURCELL, President.
JNO. M. MILLER, JR., Vice-Pres.
W. M. ADDISON, Cashier.

WE BUY BONDS CITY, COUNTY, SCHOOL DISTRICT

CORRESPONDENCE INVITED FROM CONTRACTORS AND OFFICIALS
SIDNEY SPITZER & CO., Spitzer Building, TOLEDO, OHIO
NEW YORK CHICAGO CINCINNATI

POWELL, GARARD & CO.

39 S. La Salle Street
CHICAGO, ILL.
We buy Southern Municipal Bonds (County, City, School, Road and Drainage District).

JOHN NUVEEN & CO.

First National Bank Building, CHICAGO
We purchase SCHOOL, COUNTY and MUNICIPAL BONDS. Southern Municipal Bonds a Specialty.
Write us if you have bonds for sale.

Profits For Bond Buyers

come as a result of purchasing good bonds before the demand has exhausted the supply or has advanced prices. Good Public Utility Bonds are now so desirable from several standpoints that we feel they should be most seriously considered.

Let us send you brief descriptions of several sound Public Utility Bonds yielding from five to six per cent. Ask for Offering No. AG-159.

A. B. Leach & Co.

Investment Securities
149 Broadway, New York
Chicago Philadelphia Buffalo
Boston Baltimore London

Delaware Trust Company

WILMINGTON, DELAWARE
INCORPORATED under broad, liberal, safe and stable Delaware laws. A fully equipped department for proper organization and registration of corporations.
BANKING AND TRUST department gives special attention to out-of-town customers' accounts.
TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.
REALTY DEPARTMENT has sites for manufacturing industries. Modern methods of management of property.
J. ERNEST SMITH, Pres. and Gen. Counsel.
WM. G. TAYLOR, Vice-Pres. and Treasurer.
HARRY W. DAVIS, Vice-Pres. and Secretary.
W. W. FUSEY, 2d Title and Real Estate Officer.

Edwin Warfield, President.

Fidelity and Deposit Company of Maryland

Home Office: Baltimore

Total Assets over \$11,000,000.00.

All Kinds and Classes of Surety Bonds and Casualty Insurance.

Largest and Strongest Surety and Casualty Company in the World.

The First National Bank

OF KEY WEST, FLA.
United States Depository and Disbursing Agent.
Capital - - - - - \$100,000
Surplus and Undivided Profits - 40,000
A general banking business transacted. Special attention given to collections.

GUNTER & SAWYERS

BUY School, Electric Light, Water, Sewer, Road, Levee and Drainage Bonds.

LITTLE ROCK, ARK. JACKSONVILLE, FLA.

GO SOUTH!

FOR SALE Timber, Coal, Iron, Ranch and Other Properties.
Southern States, West Indies, Mexico.
GEO. B. EDWARDS, (Broker)
Tribune Building, NEW YORK, N. Y.
Confidential Negotiations. Investigations. Settlements. Purchases of Property.

W.S. BARSTOW & CO.
INCORPORATED
CONSULTING and CONSTRUCTION ENGINEERS
PUBLIC SERVICE PROPERTIES
FINANCED and MANAGED
50 Pine Street New York

Machen Audit Co.

Expert Accountants and Auditors
Suite 434-435 Southern Building
WASHINGTON, D. C.
Financial Statements Prepared.
Business Systematizing a Specialty.

Manufacturers and Farm Loans

American manufacturers are making money now. Some of their profits ought to be invested in Farm Loans.

We offer mortgages of the choicest character on farms in Georgia and Alabama. These States are leaders in the great campaign of crop diversification that will revolutionize the South.

It is inevitable that land values will increase from year to year.

THE SOUTHERN MORTGAGE COMPANY
Capital \$300,000 Established 1870
Atlanta, Georgia

Ark., Wynne.—First National Bank will soon begin business with \$25,000 capital. J. L. Hare, Pres.; C. B. Bailey, V.-P.; W. F. McCorkle, Cash.

Fla., Avon Park.—Bank of Avon Park has made application to convert into the First National Bank of Avon Park; capital \$25,000.

Ga., Macon.—A new bank, which will probably be known as the Farmers' State Bank of Georgia, is being organized with \$1,000,000 capital.

Ga., Winder.—Winder National Bank, succeeding the Winder Banking Co., chartered; capital \$100,000; surplus \$25,000; T. A. Maynard, Pres.; L. S. Radford and A. A. Camp, V.-Ps.; G. H. Kilgore, Cash.

N. C., Lenoir.—Todd Insurance Agency, capital \$2500, will begin business Dec. 1 with E. F. Allen, Pres.; J. R. Todd, V.-P.; A. N. Todd, Secy.-Treas. This represents a combination of the Lenoir Realty & Insurance Co. and National Insurance Agency.

N. C., Selma.—Star Building Co., authorized capital \$25,000, is chartered to do an insurance business; organizers, W. A. Edgerton, Geo. W. Evans and W. M. Brannon.

Okla., Beaver.—First National Bank of Beaver chartered; capital \$25,000; John W. Webb, Pres.; John W. Savage, Cash.

S. C., Charleston.—Ashley Building & Loan Assn. is chartered; capital \$150,000; R. G. Rhett, Pres.; G. B. Buell, V.-P.; R. G. White, Secy.; T. T. Hyde, Treas.

S. C., Darlington.—Darlington Insurance & Investment Co., capital \$10,000, began business Nov. 9. W. L. Wait, Pres.; A. Hyman, V.-P.; B. W. Wait, Secy., and Julius S. McInnes, Treas.

S. C., Saluda.—Planters' National Bank is chartered; capital \$30,000; J. M. Forrest, Pres.; M. T. Pitts, Cash. This is a conversion of the Planters' Bank of Saluda.

Tex., Arlington.—First State Bank is organized with \$40,000 capital; Frank McKnight, Pres.; F. A. Capps, V.-P.; J. E. Blackman of Britton, Cash. Business has begun.

Tex., Dawson.—Bank of Dawson and the Commercial Bank of Dawson Springs have consolidated under name of the Commercial Bank of Dawson. I. N. Day is Pres.; J. E. Hays, V.-P.; T. C. Price, Cash.

Tex., Galveston.—Texas Banking & Insur-

Additions to Fire, Water and Electric Systems

Lakeland, Fla.

Sealed bids will be received by the Board of Bond Trustees, Lakeland, Florida, until 10 A. M. Friday, December 17, 1915, for separate items of materials, construction and equipment for additions to fire, water and electric systems of the City of Lakeland, Fla., including:

- 1 Quadruple Combination Motor Fire Truck, etc.
 - 1 Fire Alarm System and Connections.
 - 1 Water-works Pump.
 - 1 Air Compressor and Air Lifts.
 - 1 Artesian Well Pump, Drilling and Casing one Artesian Well.
 - 2 Water-tube Steam Boilers.
 - 1 Steam-driven Electric Generating Unit.
 - 1 Surface Condensing Equipment.
 - 1 Switchboard, etc.
 - Cast-iron Water Pipe, Fittings, Valves and Hydrants, and the laying of same.
- Specifications will be issued by the Scofield Engineering Co., Philadelphia, on December 1 and will be on file at their office in Philadelphia and in the City Hall, Lakeland, Fla. Extra copies may be obtained from Scofield Engineering Co., Philadelphia, on deposit of \$25 per copy, to be refunded on return to them.

All bids are to be in duplicate, addressed to J. R. Boulware, Secretary Board of Bond Trustees, Lakeland, Fla., and must be accompanied by a certified check in the sum of 10 per cent. of amount of bid as the guarantee if bid is accepted.

The right is reserved to reject any or all bids.

BOARD OF BOND TRUSTEES,
J. R. BOULWARE, Secy.

CONTRACTORS AND MANUFACTURERS

TIME
N. R. P. CO.
200
TIME CHECK
CHECKS

We Make Them Promptly.
Headquarters for SEALS, STOCK CERTIFICATES, STENCILS, STEEL DIES, BRASS SIGNS, ENAMEL PLATES, MEMORIAL PLATES, CHURCH SEALS and FEW PLATES.
Made on our Premises. Send for Catalogue.

THE J. F. W. DORMAN COMPANY
BALTIMORE, MD.

ance Co. has amended its charter, changing its name to the American Bank & Trust Co. Va., Hopewell.—First National Bank has made application to organize; capital \$100,000. Organizers, Littleton Fitzgerald, Jr., Richmond, Va.; O. J. Sands, T. S. Winston, James Mullen and R. H. Bruce.

Va., Norfolk.—Norfolk Savings & Loan Corporation, capital \$60,000, is organized with W. Frank Robertson, Pres.; J. W. Hough, V.-P.; M. Glennan, Secy. and Mgr., and Hughes, Little & Seawell, Gen. Counsel.

W. Va., Charleston.—The West Virginia Rural Credit Association, authorized capital \$1,000,000, is organized for the purpose of financing farmers throughout the State; incorporators, Nat C. Burdett, Fred M. Staunton, Thomas M. Gwinn, G. A. MacQueen and William T. Lively, all of Charleston.

W. Va., St. Albans.—Coal River Insurance Co., capital \$10,000, successor to the Coal River Insurance Agency, Inc., began business Nov. 4; O. F. Payne, Pres., Charleston, W. Va.; Dr. W. H. Wilson, V.-P., St. Albans, and Thos. M. Gwinn, Secy., Charleston.

NEW SECURITIES

Ala., Anniston.—\$35,000 5 per cent. 20-year \$500 denomination school improvement bonds are voted and bids for same will be opened Dec. 15. J. L. Wike is Mayor.

Ala., Florence.—Bids will be received until noon Dec. 7 by C. E. Jordan, Commr. Public Property, for \$210,000 5 per cent. 20-year water bonds.

Ark., Heavener.—Bids are now being received for \$20,000 6 per cent. 5-15-year \$100 denomination electric-light plant bonds voted Nov. 9. H. S. Beiss is Pres. Board.

Ark., Marshall.—\$20,000 bonds Road Improvement Dist. No. 1, Searcy county, have been purchased by Little Rock parties. Address Dist. Commrs.

Fla., Arcadia.—Election will probably be ordered in DeSoto county to vote on \$46,000 bridge and road bonds. Address County Commrs.

Fla., De Land.—\$400,000 6 per cent. 20-year \$1000 denomination bonds Halifax Special Road and Bridge Dist., Volusia county, have been purchased by C. W. McNear & Co., Chicago, and Gunter & Sawyer, Jacksonville, Fla., at \$396,000 and accrued interest from July 1, 1915. S. D. Jordan is Clerk.

Fla., Dunedin.—\$25,000 6 per cent. 1-20-year \$500 denomination improvement bonds have been purchased by Davidson & Co., Kansas City.

Fla., Fort Lauderdale.—\$35,000 6 per cent. 20-year \$1000 denomination municipal improvement and funding bonds have been purchased at \$36,200 by Fort Lauderdale State Bank, Fort Lauderdale.

Fla., Jacksonville.—\$250,000 drainage bonds are to be placed on the market. G. B. Ackerly is Recorder.

Fla., Marianna.—\$17,000 municipal ice-plant bonds defeated.

Fla., Largo.—\$120,000 6 per cent. 20-year Lake Largo-Cross Bayou Drainage Dist. bonds have been purchased by the Madison Bond Co., Madison, Wis.

Fla., Miami.—\$51,000 improvement bonds purchased by William R. Compton Co., St. Louis, Mo., are approved.

Fla., Miami.—Bids will be received until 7:30 P. M. Dec. 16 for \$40,000 11-12-year municipal railway, \$300,000 13-30-year municipal ship channel and \$50,000 23-30-year sanitary sewer 5½ per cent. bonds. Denomination \$1000. W. B. Moore is City Clerk. Further particulars will be found in the advertising columns.

Fla., New Smyrna.—Regarding report that Lake Ashby Drainage Dist. bonds would soon be placed on the market, a letter to the Manufacturers Record says that district is just organized and it will be about April before anything definite is decided. Beal H. Wilson is Secy.

Fla., St. Andrews.—Bids will be received until noon Dec. 15 by John W. Brown, Town Clerk, for \$24,000 5 per cent. 10-30-year bonds. Further particulars will be found in the advertising columns.

Fla., St. Petersburg.—Steps are being taken to hold an election to vote on \$20,000 bonds to pay off indebtedness of schools and to purchase equipment. Address District School Trustees.

Fla., St. Petersburg.—Election will probably be called to vote on sewer and waterfront improvement bonds. Address The Mayor.

Fla., Tallahassee.—Election is to be held Dec. 28 to vote on \$4000 5 per cent. 20-year

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street-improvement bonds. D. M. Lowry is Mayor and A. H. Williams, City Clerk.

Mo., Rome.—\$25,000 4½ per cent. 1-30-year flood county bridge bonds have been purchased by Seasongood & Mayer, Cincinnati, at par, accrued interest and cash bonus of \$25.

Mo., Savannah.—\$400,000 4½ per cent. 25-year sewer bonds recently voted have been validated. R. J. Davant is Mayor.

Ky., Hickman.—Bids will be received until 4 P. M. Dec. 15 by Tom Dillon, Sr., Mayor, for \$500 6 per cent. 10-year \$500 denomination fire apparatus bonds; dated Jan. 1, 1926; maturity Jan. 1, 1936. Jno. Pyle is City Clerk and Tom Dillon, Sr., Mayor.

Ky., Lexington.—Ordinances have been prepared providing for the issuing of \$350,000 sewer and \$100,000 school 4½ per cent. 5-35-year \$1000 denomination bonds recently voted. J. E. Cassidy is Mayor.

Ky., Stanford.—Election is to be held in Lincoln county Dec. 11 to vote on road-construction bonds. Address County Comms.

La., Winnfield.—Bids will be received until noon Dec. 18 for \$50,000 5 per cent. \$500 denomination bonds Road Dist. No. 1, Winn parish, dated Jan. 1, 1916. Address J. B. Pick Secy. Board of Supvrs.

La., White Castle.—\$25,000 5 per cent. 25-year water-works and electric-light \$500 denomination bonds have been purchased at par and accrued interest by the Interstate Trust & Banking Co., New Orleans.

Miss., Meridian.—Bids will be opened Dec. 1 for \$350 6 per cent. \$500 denomination bonds Myrick Consolidated School Dist., Jones county; dated Nov. 1, 1915; maturity 1922. Address Dr. D. R. Hunt, Secy. Dist. R. F. D. No. 1, Laurel, Miss.

Mo., Bolivar.—\$25,000 6 per cent. 15-year Bolivar Special Road Dist. Polk county road-improvement bonds are voted. Address Geo. Mark Upton.

Mo., Joplin.—\$350,000 school bonds are voted. J. A. Becker is Pres. Board of Education.

Mo., Kansas City.—Bids will be received until 10 A. M. Dec. 13 for the following bonds: \$125,000 5 per cent. hospital, \$100,000 grading, \$125,000 fire and \$125,000 police station 4½ per cent. bonds. Address M. A. Ryan, City Comp.

Mo., Lees Summit.—\$25,000 5 per cent. \$500 denomination water-works bonds are voted. Address T. P. Gunn.

Mo., Lexington.—\$49,000 bonds Waverly Special Road Dist., Lafayette county, are voted. Address County Comms.

Mo., Marshall.—\$1,310,000 Saline county road bonds are voted. Address County Commissioners.

Mo., Neosho.—Bids were opened Nov. 30 for \$48,000 6 per cent. 20-year \$500 denomination school bonds. Award not stated. H. H. Knotten is Pres.

Mo., Springfield.—Jan. 11 election is to be held. It is stated, to vote on \$400,000 5 per cent. 20-year municipal light-plant bonds. Address The Mayor.

N. C., Asheville.—Bids will be received until noon Dec. 20 for \$200,000 5 per cent. 30-year \$1000 denomination school bonds. F. L. Conder is City Secy.-Treas. Further particulars will be found in the advertising columns.

N. C., Charlotte.—Independence Trust Co., Charlotte, has been awarded at 105 the issue of from \$10,000 to \$20,000 6 per cent. 10-year serial street-improvement bonds. Amount not yet determined.

N. C., Edenton.—\$25,000 Edenton Graded School Dist. bonds are voted. J. R. McMullan is Clerk Board Town Councilmen.

N. C., Marion.—Petition is to be filed with Comms. of McDowell County, asking that \$500 road bonds be issued for Dome Dist. Address County Comms.

Okla., Ardmore.—Question of holding election to vote on bonds for building a pipeline to gas fields is under consideration. Address The Mayor.

Okla., Bartlesville.—Election is soon to be held to vote on from \$75,000 to \$100,000 of bonds in aid of Interurban railway. Address The Mayor.

Okla., Claremore.—Townships in Rogers county have voted road bonds as follows: Catoosa township, \$18,000; Inola township, \$20,000; Collinsville township, \$50,000; Chelsea township, \$50,000; Foyil township, \$25,000; and Verdigris township, \$50,000. Address County Comms.

Okla., Collinsville.—\$30,000 road bonds are voted. Address The Mayor.

Okla., Holdenville.—\$100,000 5 per cent. Hughes county courthouse and jail bonds

were voted Nov. 17 and bids for same will be received until 2 P. M. Dec. 8. Dated Dec. 1, 1915; maturity Dec. 1, 1940. Denomination \$1000. W. W. Johnson is Chrmn. Bd. County Comms. and J. F. Busey, Treas.

Okla., Lahoma.—\$6000 electric-light-plant bonds have been purchased by Kennedy Bros. of Enid.

Okla., Okmulgee.—Election is to be held in Okmulgee county Dec. 28 to vote on \$150,000 5 per cent. courthouse and jail bonds. Address County Comms.

Okla., Tulsa.—Election to vote on \$600,000 water-works bonds is postponed from Nov. 23 to Jan. 2. E. B. Cline is City Auditor.

S. C., Allendale.—Bids will be received until Dec. 15 for \$20,000 5 per cent. 20-30-year road-improvement bonds issued by Allendale, Baldec and Bull Pond townships, Barnwell county. Address Jas. M. Patterson. Further particulars will be found in the advertising columns.

Tenn., Bristol.—\$60,000 5 per cent. 30-year \$500 denomination high-school bonds are voted and bids for same will be opened Jan. 18. W. H. Lynn is Commr. Accts. and Finance.

Tenn., Chattanooga.—\$100,000 4½ per cent. 30-year wharf bonds have been purchased by the Harris Trust and Savings Bank, Chicago.

Tenn., Crossville.—The \$100,000 5 per cent. 20-40-year Cumberland county road bonds recently reported sold were purchased by N. W. Halsey & Co., Chicago.

Tex., Anahuac.—\$30,000 5½ per cent. Trinity River Irrigation Dist. bonds are voted. Address Board of Directors, A. E. Agrelius, Secy.

Tex., Austin.—The Attorney-General has approved the following securities: \$17,000 5 per cent. bonds Colorado County Drainage Dist. No. 1; \$75,000 bonds Montgomery County Road Dist. No. 3; \$121,000 6 per cent. bonds Ellis County Drainage Dist. No. 2; \$300,000 5 per cent. 20-year El Paso county road bonds.

Tex., Bay City.—J. B. Arpine Dredging Co. has purchased 5 per cent. 40-year bonds Drainage Dist. No. 2, Matagorda county, at \$39,300, par and accrued interest.

Tex., Beeville.—\$60,000 6 per cent. 1-15-year Bee county funding warrants have been purchased by J. L. Arlitt, Austin, Tex. (Previously noted under date of Belton, Tex.)

Tex., Belton.—\$40,000 sewer and water-works bonds are voted and steps are being taken to place them on the market. Address The Mayor.

Tex., Crystal City.—\$40,000 road-improvement bonds have been voted. Address The Mayor.

Tex., Denison.—\$50,000 5 per cent. viaduct bonds have been purchased by N. W. Halsey & Co., Chicago at 102.116.

Tex., Fort Worth.—Question of issuing \$300,000 water-works bonds is under consideration. Address Mayor Tyra.

Tex., Galveston.—Election to vote on \$875,000 municipal improvement bonds will be held Jan. 18. Lewis Fisher is Mayor. (Previously noted.)

Tex., Jacksonville.—\$150,000 bonds Road Dist. No. 1, Cherokee county, defeated.

Tex., Liberty.—\$21,000 5 per cent. bonds Liberty County Road Dist. No. 1 have been purchased by J. L. Arlitt, Austin, Tex. This is remainder of \$150,000 issue authorized in 1913.

Tex., Lytle.—\$12,000 5 per cent. 20-40-year school district bonds have been sold. A. E. Hester is Secy. Board of Education.

Tex., Lufkin.—Election is to be called to vote on \$200,000 Lufkin precinct, Angelina county, road bonds. Address County Commissioners.

Tex., Marlin.—Election will probably be held in Falls county to vote on \$300,000 highway bonds. Address County Comms.

Tex., Orange.—Cove Dist., Orange county, has voted \$500 school bonds, and it is stated they will soon be offered for sale. Address Board of Education.

Tex., Port Arthur.—Steps are being taken to issue \$175,000 drainage bonds. Address Board of Comms.

Tex., Seguin.—Election is to be held to vote on \$40,000 sewer bonds. Chas. Bruns is Mayor.

Tex., Wichita Falls.—\$225,000 5 per cent. 40-year \$1000 denomination Wichita county Courthouse bonds are voted. Address County Comms. Harvey Harris, Judge.

Va., Abingdon.—\$18,000 road bonds Kinderhook Dist., Washington county, have been purchased by the Dominion National Bank of Bristol for \$18,200 and interest.

Municipal Bonds Purchased

Correspondence invited from investors wishing to sell their holdings of seasoned marketable Municipal Bonds, and from municipal officials and contractors in connection with entire new issues.

N. W. HALSEY & CO.

49 Wall Street, New York

PHILADELPHIA CHICAGO SAN FRANCISCO

We Offer, Subject to Prior Sale

\$10,000 City of Cedartown, Georgia, 5% bonds

Denomination, \$500	Assessed Valuation, \$2,158,189.51
Interest Periods, January and July	Total Bonded Debt, 132,000.00
Due in 1945. Price, \$104 and interest	

W. M. DAVIS COMPANY

Stocks and Bonds MACON, GEORGIA

CHARLES L. HEHL, C. P. A., President JOHN KUCHLER, C. P. A., Vice-President
ERNEST E. WOODEN, C. P. A., Sec. and Treas.

BALTIMORE AUDIT COMPANY

901-903 Calvert Building BALTIMORE, MD.

AUDITS SPECIAL EXAMINATIONS SYSTEMATIZING
ALONZO RICHARDSON & CO.
CERTIFIED PUBLIC ACCOUNTANTS ATLANTA, GA.
A staff of thoroughly trained and qualified accountants, whose experience enables them to make a critical analysis of books and accounts.

We Buy City, County School and Drainage **BONDS**
FROM MUNICIPALITIES OR CONTRACTORS
We are in position to pay HIGHEST PRICES.
Write or Wire Us Your Offerings
THE NEW FIRST NATIONAL BANK Assets, \$5,000,000 COLUMBUS, O.

BLACK & COMPANY
(WILMER BLACK, C. P. A.)
CERTIFIED PUBLIC ACCOUNTANTS and AUDITORS
All Work under Personal Supervision of Maryland Certified Public Accountant Suite 1208 Garrett Building BALTIMORE, MD.

To Manufacturers and Capitalists

Contemplating the Establishment of Industrial Enterprises

Attention is called to the exceptionally favorable location of

NEWPORT NEWS, VA.

on Hampton Roads, fifteen miles from the sea. deep water, railway and sea transportation facilities unrivalled. Climate salubrious. Apply to

W. B. LIVEZEY, President OLD DOMINION LAND COMPANY
NEWPORT NEWS, VA.

LOANS MADE TO STATES, CITIES, COUNTIES, ETC.
Also Entire Issues of Bonds Purchased

We prepare and certify as to the genuineness of
MUNICIPAL BONDS

Largest Capital and Surplus of Any Financial Institution in Maryland or Any Southern State

Established 1884 Resources \$21,000,000
MERCANTILE TRUST AND DEPOSIT COMPANY
OF BALTIMORE

A. H. S. POST, President F. G. BOYCE, Jr., Vice-President

WE OFFER FOR PUBLIC SUBSCRIPTION
\$1,000,000
Poole Engineering and Machine Company
of Delaware

Plant Located at Woodberry, Baltimore, Md.

Capital Stock, Par Value \$100

Books will be opened at the offices of the Syndicate Managers on Tuesday, November 30, and closed on Saturday, December 4, at 1 o'clock. Allotments will be made immediately thereafter.

Particular attention is called to the following extracts from a letter written by S. Proctor Brady, President. A copy of circular giving full details will be mailed upon request.

1. **CAPITALIZATION**—\$3,000,000 (30,000 shares) full paid and nonassessable capital stock. The Poole Engineering and Machine Company of Delaware owns all of the capital stock of the Poole Engineering and Machine Company of Maryland, subject to \$500,000 First Mortgage Bonds.
2. **ORGANIZATION**—This business was established in 1843 (72 years ago), since which time it has been successfully operated and the plant maintained at the highest degree of efficiency.
3. **MANAGEMENT**—The business of the Company is in the hands of experienced and capable men, who are especially well versed in the manufacture of war munitions, guns, etc.
4. **LOCATION AND EQUIPMENT**—The Company's plant is located at Woodberry, a portion of Baltimore City (about twenty acres). The proving ground and loading station are located at Texas, Md., on the Pennsylvania Railroad (about fifteen miles from Baltimore), comprising 350 acres. The plant of the Company is at present equipped to turn out in large quantities 3-inch, 6-inch and 12-inch shells, also one-pounder rapid-fire machine guns and shells. Nine-five per cent. (95%) of the new machinery for the increased output will be useful in the regular business of the Company, the capacity of which will be increased about four times.
5. **CONTRACTS AND EARNINGS**—The Company has signed contracts amounting to \$17,785,000, on which the minimum net profits are estimated at \$3,000,000, or sufficient to retire the outstanding bonds and leave over 80% available for the stock. It is estimated that these contracts will be completed by December, 1916. In addition to these munition contracts, the Company is running full capacity on its regular work.
6. **THE NET PROFITS** of \$3,000,000 are figured after entire cost of new machinery and additional plant (which we estimate at \$500,000) have been cared for.

We offer the above stock at \$95 per share

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Spartanburg, S. C.

[Continued from Page 77.]

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Southern Installations of Refrigerating Machinery.

Out of 52 installations of York refrigerating machinery reported to have been made in the United States since October 19 by the York Manufacturing Co. of York, Pa., 18 of them were in the Southern States. This equipment includes one 6-ton vertical single-acting belt-driven enclosed-type refrigerating machine and high-pressure side complete for the Big Four Packing Co., Waco, Tex.; one 8-ton refrigerating machine and high-pressure side complete for the A. B. Jones Co., Jonesboro, Ark.; one 4-ton refrigerating machine and high-pressure side complete for the Wm. L. Rock Flower Co., Kansas City, Mo.; one 6-ton vertical refrigerating machine and high-pressure side complete, also a 20-ton shell and tube brine cooler for the Campbell Baking Co., Kansas City, Mo.; one 2-ton refrigerating machine and high-pressure side complete for the Winter Haven (Fla.) Water, Ice & Light Co.; one 20-ton refrigerating machine, belt driven, and complete high-pressure side for the Atlantic Ice & Coal Corporation, Macon, Ga.; one 4-ton refrigerating machine and high-pressure side complete for H. A. Lewis, Southern Pines, N. C.; one 20-ton refrigerating machine and high-pressure side complete for the Kratzer Ice-Cream Co., Montgomery, Ala.; one 6-ton refrigerating machine and high-pressure side complete for the Montgomery (Ala.) Chero-Cola Bottling Co.; one 20-ton refrigerating machine and high-pressure side complete for Jefferson Market, Richmond, Va.; for Fort Worth, Tex., plant of Armour & Co., one ammonia accumulator; Hamilton & Horlick, San Benito, Tex., 4 coils of "Shipley" ammonia condensers; Eagle Pass (Tex.) Ice Manufacturing Co., two 10-ton flask-type steam condensers; Cloverdale Dairy Co., New Orleans, La., one 50-ton horizontal

shell and tube-brine cooler; Mathieson & Kall Works, Saltville, Va., two 300-ton shell and tube-brine coolers and four multi-valve safety heads, and three coils of "Shipley" ammonia condensers for the Galveston (Tex.) Packing Co.

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